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ITS Support for Pedestrians and Bicyclists Count: Developing a Statewide Multimodal Count Program

by

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16. Abstract

It is critical to understand the travel behavior of pedestrians and cyclists on Louisiana's roadways. Not only do pedestrian and cyclist counts assist in research for safety, but these statistics are also essential for planners and policymakers when evaluating the usage of roadways and dictating infrastructure spending. Better understanding of overall statewide and location-specific transportation trends ultimately affects long-term planning and investment. Counting of pedestrians and cyclists using video surveillance and image processing technology has promised to be effective and feasible. While the research on newer technologies is not as robust as that of traditional ones, there is enough evidence to justify and guide the use of automated video count technology. This study concentrates on a specific algorithm, which would aid in automatic counting. This goal is achieved by following a part-based method, which utilizes the Histogram of Oriented Gradient (HOG) technique as well as a latent support vector machine (SVM). This technique was the preferred algorithm for automation due to its high-speed processing capability and its open source availability. The accuracy of the HOG algorithm in this study is validated using manual counts of pedestrians and cyclists from the collected video data. It is anticipated that the results will assist LTRC-16-4SA in evaluating available count technology options and in identifying preferred alternatives suitable for statewide deployment. The tested algorithm led to accuracy rates between 29-91% for pedestrians and 0-60% for cyclists. Despite the poor results obtained, the algorithm's efficacy was thoroughly evaluated and documented. Some of the specific challenges faced in this study involved maintaining accurate viewpoint angles as well as conducting object detection in high-density environments and complicated scenes like intersections. New automated video counting systems have sought to improve algorithms in these problematic areas. Future work involves effectively handling these challenges and reevaluating the algorithm while considering others currently being used today.

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ABSTRACT

It is critical to understand the travel behavior of pedestrians and cyclists on Louisiana's roadways. Not only do pedestrian and cyclist counts assist in research for safety, but these statistics are also essential for planners and policymakers when evaluating the usage of roadways and dictating infrastructure spending. Better understanding of overall statewide and location-specific transportation trends ultimately affects long-term planning and investment. Counting of pedestrians and cyclists using video surveillance and image processing technology has promised to be effective and feasible. While the research on newer technologies is not as robust as that of traditional ones, there is enough evidence to justify and guide the use of automated video count technology. This study concentrates on a specific algorithm, which would aid in automatic counting. This goal is achieved by following a part-based method, which utilizes the Histogram of Oriented Gradient (HOG) technique as well as a latent support vector machine (SVM). This technique was the preferred algorithm for automation due to its high-speed processing capability and its open source availability. The accuracy of the HOG algorithm in this study is validated using manual counts of pedestrians and cyclists from the collected video data. It is anticipated that the results will assist LTRC-16-4SA in evaluating available count technology options and in identifying preferred alternatives suitable for statewide deployment. The tested algorithm led to accuracy rates between 29-91% for pedestrians and 0-60% for cyclists. Despite the poor results obtained, the algorithm's efficacy was thoroughly evaluated and documented. Some of the specific challenges faced in this study involved maintaining accurate viewpoint angles as well as conducting object detection in high-density environments and complicated scenes like intersections. New automated video counting systems have sought to improve algorithms in these problematic areas. Future work involves effectively handling these challenges and reevaluating the algorithm while considering others currently being used today.

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IMPLEMENTATION STATEMENT

The findings of this study support LTRC Project No. 16-4SA whose overall findings will be directly applicable for implementation by DOTD. The entire study also involves the development and recommendation for both short-term and long-term multimodal data collection program opportunities. The deliverables include a funding guide, a blueprint for potentially utilizing existing video data, and a detailed guide for one or more preferred data collection methodologies that evaluate performance in the context of complete streets policy and design. In addition to use by DOTD, these findings may be of use to Metropolitan Planning Organizations (MPO) and local government entities throughout Louisiana, and beyond.

The research teams for both this support study and LTRC-16-4SA will also endeavor to present and publish the findings, which contribute to the overall literature in this field or may be of interest to practitioners in journals with a national audience in order to facilitate the transfer of research more broadly.

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INTRODUCTION

Understanding the travel behavior of pedestrians and cyclists on Louisiana's roadways is critical to evaluating safety outcomes relative to rates of exposure; identifying appropriate, context-sensitive complete streets infrastructure interventions; and understanding overall statewide and location-specific transportation trends. Better understanding of such trends ultimately affects long-term planning and investment. Pedestrian and cyclist counts, as well as vehicle counts, are important sources of information for planners and policymakers when dictating transportation planning and infrastructure spending. Current and reliable statistics are essential for evaluating the usage of roadways and for optimizing spending and investment.

A wide range of hardware is available to address the challenges associated with pedestrian and cyclist counting such as laser beams, infrared counters, piezoelectric pads, etc. However, most of these sensors fail to give accurate measurements of density. Manual counts performed by humans in the field are common but are labor-intensive and inefficient for large-scale counting programs sought by cities and states today. Also, these counts generally rely on human capacity and accuracy rates are prone to human error. In areas with a high density of pedestrians and cyclists, the method of manual counting is essentially impractical. As a result, there has been more effort into the development of algorithms that minimize human intervention when counting. Despite the challenges, automated data collection presents many benefits over manual counts. Thus, video image processing technology can play a key role as the methods and equipment improve and become more accessible and financially feasible.

The purpose of this study is to research the feasibility of developing an automated pedestrian and cyclist counting system from archived video footage. This study utilized the Histogram of Oriented Gradient (HOG) technique due to its high speed processing capability and its open source availability *[1]*. The accuracy of the HOG algorithm is validated using manual counts of pedestrians and cyclists from the collected video data. It is anticipated that the results will assist LTRC-16-4SA to evaluate available count technology equipment options and identify preferred alternatives suitable for statewide deployment.

OBJECTIVE

The objective of this study was to develop a system for automated pedestrians and cyclists counting on roadways using archived video data. This goal was achieved by following a part-based method, which utilizes the Histogram of Oriented Gradient (HOG) technique as well as a latent support vector machine (SVM). This technique is the preferred algorithm for automation due to its high-speed processing capability and its open source availability. It is anticipated that the results of this study will assist LTRC-16-4SA in evaluating available count technology equipment options and identifying preferred alternatives suitable for statewide deployment.

SCOPE

The research team relied on video footage collected at locations on the campus of Louisiana State University (LSU) as well as one site in Baton Rouge, Louisiana. These were sites with expected high volumes of pedestrians and cyclists. The study is exploratory in nature, researching on the feasibility of developing an algorithm capable of automated counts. The research documents other current research and technology used today in this field of counting.

METHODOLOGY

The research team performed several tasks to achieve the study's objectives. This section includes background information that highlights literature on current counting methods, a discussion on mainstream algorithms used in image processing and object detection, and a brief description of HOG, the technique adopted for this study. The data collection procedure is then presented by discussing the study area, camera implementation, and collection of data. Lastly, the analysis using the collected data is summarized.

Background

Manual Video-Based Counting Methods

Using video technology for pedestrian and cyclist counting programs is relatively new but has shown some promise. As with counting technologies in general, video counting technology can be broken down into two distinctive categories, manual and automated. Video technology can be used to perform manual observation counts simply by allowing researchers to review video data, while automated video counts rely on video image processing technology to detect, classify, and record data. Both techniques have their own advantages and limitations.

An obvious advantage that video observation presents over traditional manual counting is the ability to manipulate the speed at which the data is observed. In cases of high volume, the observer can slow down, pause, or even rewind data for verification and thus achieve increased accuracy. The ability to review collected video data, allows for more accurate accounting of user characteristics (e.g., gender, race, helmet use, etc.) for the given time an observer has to review and analyze the data. Video observations also allow for counts of a longer duration that would otherwise be impossible or suffer in terms of accuracy due to counters tiring or becoming distracted standing in the field for hours at a time. Through video observations, an agency can keep archived video footage, which can be reviewed for verification as and when needed. A convenient benefit that manual video observations provide is a way to analyze the variance between manual counts and automated counting equipment for testing accuracy.

The primary limitation of manual video observation is the same as with any manual count. This method ultimately depends on the accuracy and motivation of the human counter. Apart from human error, video observations (manual or automated) are susceptible to the problems of traditional automated counting devices (e.g., theft, vandalism, malfunctions, etc.). Additionally, weather and lighting can greatly inhibit counting via video observation while other forms of automated counting do not suffer in this way. While manual video observations are the most accurate form of counting under ideal conditions (no time constraint and no human error), there exist the problem of additional labor hours required to meticulously view and document the data.

Automated Video-Based Counting Methods

Automated video counting technology, on the other hand, can eliminate many of the labor costs associated with manual counting. By using a camera and computerized algorithms, automated video counting systems can collect and catalog data instantaneously or sequentially, without the need of a human aside from setup and maintenance.

Although some early studies demonstrated the potential utility of using video technology for bicycle and pedestrian counting, the development of reliable and accurate methods for deployment is relatively new *[2]*. The technology has come a long way in the past couple of decades. Even as far back as the year 2000, a video count system that could detect, track, and classify objects was created, though its accuracy rate for counting bicycles was only 70% *[3]*. The process of detecting movement and singling out an object, tracking the object frame-by-frame, and then classifying it by type (e.g. pedestrian, bicycle, vehicle, etc.) is broadly referred to in the literature as image processing, which is the basis of any automated video counting system.

Most of the work in automated video counting since has essentially been an effort to improve upon one or more of those three basic steps of image processing. Malinovskiy et al. improved detection and tracking of pedestrians and cyclists with a simplified system that achieved a 92.7% average count accuracy rate *[4]*. Somasundaram et al. created an algorithm to improve the classification step in the process, thus allowing a system to better distinguish between pedestrians and cyclists on trails and paths *[5]*. There have been many technical studies attempting to perfect complicated algorithms in order to improve overall accuracy. Generally, the process consists of those three basic steps: detection, tracking, and classification, even if they are referred to by slightly different terms.

As a detailed example, Li et al.'s "Real-Time System for Tracking and Classification of Pedestrians and Bicycles" shows that the researchers described their monitoring process as including the steps, motion detection, tracking, and classification *[6]*. Methods of motion detection include image difference, optical flow, and background subtractions. The study deemed image difference as simple but inaccurate and optical flow as complicated and easily disturbed by noise. Thus, an adaptive background subtraction model known as the Gaussian mixture model (GMM) was used for detecting and extracting moving objects. An intermediary step occurs between motion detecting and tracking whereby overlapping shadows that cause misclassification are removed before the object is extracted. The researchers used the Kalman Filter (KF) to plot the objects' paths in the tracking step, and a backpropagation neural network (BPNN) was used to classify objects as vehicle, bicycle, or pedestrian. The algorithm was trained to correctly identify objects by using 100 extracted moving objects of each category as feature vectors, or numerical representations, in order to facilitate pattern recognition and machine learning.

Whereas video image processing is simply a process that extracts and refines images for classification, computer vision (CV) takes that a step further by attempting to replicate and exceed human vision by learning, inferring, and acting based on visual input. Image processing and machine learning are techniques that CV uses. In the aforementioned study, Li et al. achieved an 85% detection accuracy rate for pedestrians and a count error rate of less than 13% for bicycles across all three test sites *[6]*. The miscounts were primarily due to occlusion, a term often used in the literature to describe a situation in which an object, such as a vehicle, blocks the camera from properly detecting or classifying another object, such as a pedestrian or bicycle. Occlusions can also occur if an object ceases movement for long enough to merge into the background, from the system's perspective. Ling et al. achieved accurate pedestrian counts with a new counting system using a stereo, or 3D, camera and a laser scanner to avoid occlusion as much as possible, while Belbachir et al. achieved a classification accuracy rate of over 92% using a similar 3D system *[7, 8]*.

Recent Research

Research has increased significantly in the past five years with algorithms becoming more sophisticated. Another study by Li et al., designed to measure pedestrian counts, direction, and walking speed, concluded that "computer vision techniques have the potential to collect microscopic data on road users at a degree of automation and accuracy that cannot be feasibly achieved by manual or semi-automated techniques" *[9]*. Similarly, Zaki et al. determined that "accurate automated cyclist counts and tracking can be performed with CV techniques and may expand the possibilities for cyclist data collection significantly, both geographically (different locations) and temporally (for longer periods of time)" *[10]*. Recent attempts to improve CV algorithms typically target specific problems with the technology, including classification difficulties and counting in complicated environments.

Classification has always been the most challenging step in image processing. Somasundaram et al. plainly described that the reason it is challenging for machines to distinguish between bicycles and pedestrians is that "a bicyclist is an intricate combination of a bicycle and a person" *[11]*. In response, their team developed a new algorithm aimed at further improving classification between pedestrians and cyclists. More recently, Shahraki et al. developed an improved system for video counting of bicycles by implementing a combination of classification techniques *[12]*. It was determined that combined approaches proved more accurate than using a single classification technique.

New automated video counting systems have sought to improve algorithms in certain problematic areas, including high-density environments, complicated scenes like intersections, and occlusion resulting from lighting and weather. Li et al. developed an improved system for counting pedestrians in environments with large, dense crowds *[13]*. Their process used two detectors to detect both the upper bodies and full bodies of pedestrians and then combined the results to improve count accuracy. Zaki and Sayed also proposed an effective method for measuring bicycle activity in high-density environments, including volume count and average speed *[14]*. The study concluded that it is feasible to collect cyclist data with automated video technology in dense conditions, and the research team hoped that engineers and planners would begin to trust and rely on this type of automated data collection to guide their processes.

Zangenehpour et al. presented a new method for short-term bicycle counts in different environments, namely at intersections, where more traditional counting methods, like loop detectors and pneumatic tubes, are not as effective *[15]*. Automated video technology's ability to perform counts across a screen line or at intersections, as well as in mixed traffic scenarios is becoming a key advantage. While some more traditional automated technologies may not be affected by lighting and weather, these factors can greatly affect the accuracy of automated video counts, as they can with manual video observations. However, a study by Kristoffersen et al. suggests that thermal cameras may be of use both day and night *[16]*. The study used two cameras in a stereo setup and a 3D tracking algorithm to limit occlusions. The method achieved accuracy rates of 95.4% and 99.1% in the two five-minute tests in a public setting with a moderate density of people.

Though many sophisticated automated video counting systems have achieved greatly improved accuracy rates from the early days of the technology, the fact remains that a major downside of this technology is its high cost compared to other automated counting technologies. Still, cameras have increasingly become more affordable, thus making automated video technology a more viable count method than it once was. Furthermore, the opportunity exists to use devices that are already in place, like security and surveillance cameras, which can further cut overall cost.

Several recent studies have explored, either directly or tangentially, leveraging existing cameras. Existing cameras that could be used for this type of research generally have a top-down view of an area, which can cause difficulties in image processing systems, particularly in the tracking phase. Yuan et al. tested pedestrian detection with a top-view camera and offered tracking and classification methods that attempted to solve common issues stemming from top-down angles *[17]*. Yu et al. then explored a method of pedestrian counting with an overhead camera without tracking as part of the process, instead proposing a spatial-temporal matrix *[18]*. Lin and Liu proposed a new idea for counting pedestrians with surveillance videos using a sophisticated two-stage tracking process *[19]*. Lastly, Wang et al. noticed that unpredictable movements were an issue with tracking pedestrians via surveillance systems, so they devised a system to account for this, achieving a 96.04% count accuracy *[20]*.

Eriksson also explored the use of existing cameras for collecting traffic data, including bicycles and pedestrians *[21]*. Some of the challenges of this method included poor video quality, issues with perspective, occlusion, and lighting. The author developed a software prototype to detect and track vehicles, bicycles, and pedestrians, but it was not able to tell the difference between users and classify them accordingly. The study suggested that the use of existing cameras (traffic cameras, police cameras, red light cameras, security cameras, etc.) are typically permanent, or at least long-term, and that any method of using them for traffic counts "should require minimal user input but facilitate easy validation of counts" *[21]*. Expanding this emerging field, Hipp et al. sought to use existing video technology to measure active transportation from a public health standpoint, determining that "publicly available web data feeds have great potential for capturing behavioral change associated with (built environments) BEs" *[22]*.

New devices are becoming very portable and relatively easy to install. Pires et al. developed a method for a counting program in Pittsburgh earlier this year *[23]*. The research team opted for a portable data collection system consisting of "a ruggedized Windows tablet (Panasonic Toughpad), an extensible pole, and a miniature bullet camera" *[23]*. The bullet camera is affixed to the top of the extended pole, and that rig is secured onto a sturdy post found along the streetscape. The tablet is used to manage data collection, and the view of the camera can be monitored with it in case adjustments are needed. While some long-term counts may not be as practical with automated video technology as with more traditional automated counting devices due to battery life and data storage capacity, this system's battery capacity allows for up to twelve hours of data collection. The method has received positive reviews from both the City of Pittsburgh as well as the research community in general.

Current Algorithms in Image Processing

Most of the algorithms used today in image processing and object detection can be placed under the major categorical methods: template based, model based, model free based, and part-based *[24]*. The template based algorithm can be defined as the process of finding a part in an image and matching it with a previously known template. The template searches for a specific object within an image. Let the template be referred as *T(x, y)* with *(x, y)* being the physical coordinates. The next step is to slide that template image over the test image *F(j, k)* with coordinates *(j, k)* and find the sum of products. Once the entire test image is covered by the sliding template, the position with the maximum sum of product is termed to be the area of the template match *[25]*. For example, if a flower is to be identified, the process begins with a template of flower, which is then slid across an entire image. Generally, there are many template matching methods, such as squared difference, normalized squared difference, cross correlation and so on *[26]*.

Another major algorithm utilized in image processing for object detection is called model-based object detection. With this method, an object model is obtained by training a large amount of data to capture the object's appearance and geometrical properties *[27]*. This method can be utilized in an industrial scenario where the objects are known to be constant with regards to shape and size *[25, 28, 29]*. Unfortunately, this technique fails to give precise results when the objects vary heavily with time.

Image processing and more specifically, object detection focuses on the use of local and global features. Simple local features are mostly confined to a small area in the overall image. Examples include color, gradient, or the gray value of a pixel which are confined to this small area of interest. On the other hand, global features contain information on the entire image. The advantage of using local features is that it can cope with the problem of occlusions *[25, 29]*. Humans are one of the most challenging categories in the study of object detection. There exists a rather large variability in the local and global appearance of pedestrians. For example, various types and styles of clothing can cause detection issues. In addition, the overall shape of objects experiences a large range of variations due to different poses. Essentially, only a few local regions are characteristic of the object being monitored.

Another, relatively simpler, approach in object detection was achieved using the model free approach. In their research, Malinovskiy et al. uses model-free video detection and tracking of pedestrians and cyclists by utilizing inherent features of objects such as the center of mass, the height of the object, the width of the object etc. Though this was computationally easier to achieve, the features used to detect the objects were variant with the varying conditions and hence the efficiency of accurate detection was low *[30]*.

Researchers have concentrated on utilizing spatial temporal analysis for improving the robustness of a pedestrian counting algorithm. They avoided the tracking phase and substituted it with spatial temporal analysis *[31]*. This technique has also been used to detect objects with a variable background when a moving camera is utilized, that is, when both the object as well as the background are moving *[32]*. A current state of the art technique, called YOLO (you only look once) which is proposed by Redmon et al., guarantees quick real time detection rates *[33]*.

Recent research has also been concentrating on using the concept of deep learning as well as a neural network approach to solve problems with object detection *[34, 35, 36]*. Further improvements can be obtained in the detection capability by using deep learning convolutional neural networks at the cost of complex training mechanisms. These methods are often not feasible for quick implementation *[37]*. The template based method, model-free approach and model based method approach are traditional algorithms in object detection. Deep learning is based on convolutional neural network. It requires training of the data similar to the part-based method which is described in the subsequent paragraph, but the decision making relies on convolutional neural networks.

In this project, the part-based method is followed as suggested by Felzenszwalb et al. *[38]* due to a simpler execution, and available open source algorithm. This algorithm follows a partial based model where each part can be explained in terms of other subparts. In regards to object detection, it utilizes the concept of HOG *[1]*. This technique exploits the concept of a locally normalized histogram as their feature set to detect the object. HOG is used when image is divided into cells and for each of the pixels within the cells a histogram of direction is calculated. The distribution of intensity within these pixels are used as a descriptor in analyzing the object's shape and appearance. Efficient pedestrian and cyclist detection systems can be developed by combining the HOG technique and a latent support vector machine (SVM). A line known as a hyperplane represents a SVM. This line divides a given plane into two parts and these parts can be considered two classes of objects. Hence a SVM classifier helps in putting the detected object to a particular category *[37]*. In object detection it often necessary to have object representations that are feature invariant and HOG can provide this feature. By combining HOG with a well-established classifier such as SVM, detection speed and accuracy can be improved *[37]*. Localization of these histogram features has an advantage in that the characterization of objects is performed by the direction of the gradient while not requiring the prior knowledge of the corresponding edge position. The next section gives a succinct description of how HOG works and how it was utilized for this study.

The Part-Based Method

HOG utilizes a low level feature which is shown to outperform other competitive features, like wavelets. Firstly, Felzenszwalb et al. *[38]* computed an edge oriented histogram on a dense grid of uniformly spaced cells. The image pyramid is obtained by smoothing and scaling the original image, which is at the root of the pyramid. Smoothing in image processing refers to selecting the important data and filtering out the noise or unwanted data. It can also be understood as averaging the data. Scaling is simply the number of pixels in an image. For example, if the original image consists of 100x100 pixels, scaling it up would mean the new image is 200x200 pixels. The next step in the research was to overlap the local contrast normalization to improve the algorithm's overall performance. The research team also used a SVM classifier to study models for human. SVM classifiers can also be considered supervised learning models with associated learning algorithms to analyze data which are used for classification.

Using local features to learn body parts is an efficient approach to human detection. Part-based methods model objects as a rigid or deformable configurations of subparts, which is shown to be very effective for handling issues of occlusion *[39]*. Let H be the HOG features of the image while the function $p = (x, y)$ represents the location of an area within the image. The detection score at location (x_o, y_o) is defined in the work as:

$$score(x_0, y_0) = b + \sum_{i=1}^{n} s(p_i) \tag{1}$$

where, b is the bias term, n is the number of parts. The function $s(p_i)$ is the score of parts i which is defined as:

$$s(p_i) = F_{p_i} \cdot \emptyset(H, p_i) - d_{p_i} \cdot \emptyset_d(d_x, d_y) \tag{2}$$

where, F_{p_i} is the part filter and $\emptyset(H, p_i)$ is the vector which is equal to the concatenation of the feature vectors from H. The parameter H is taken to be at the sub window of part $p_i(d_x, d_y)$ which is the displacement of the parts with respect to the root position.

Felzenszwalb et al. also used a star structured part-based model that consists of a root filter and a set of parts associated using a deformation model. A root filter is a simple filter and defined as an array of n-dimensional vectors. The root filter is designed to cover the entire object during the sliding of the window whereas the part filters cover the specific parts of the object. The score associated to each star model is the summation of the scores of the root filter. The parts of an object at a given location and scale minus a deformation cost, measures the deviation of parts from their ideal location relative to the root. The scores of the root and the parts are defined as the dot product of a learnt filter, which belongs to that part and a set of extracted features for that specific location. Also, a principle component analysis (PCA) has been applied to the HOG features in order to reduce the dimensionality.

In this study, the models are largely based on the pictorial structures framework from Felzenszwalb et al. All of the models use linear filters on dense feature maps. A feature map is an array whose entries are d-dimensional feature vectors and are obtained from a dense grid of locations in an image. Every feature map represents a local image patch (a small local region of the image). A filter is defined by an array of d-dimensional weight vectors and is a rectangular template. The score or response of a filter F at a position (x, y) in a feature map G is defined as follows:

$$score = \sum_{x',y'} F[x',y'] \cdot G[x+x',y+y'] \quad (3)$$

In order to define a score at different positions and varying scales in an image, a feature pyramid was used as discussed in the first paragraph, which specify a feature map for a finite number of scales in a fixed range. An example of a feature pyramid is shown in Figure 1.

A parameter λ is defined as the number of levels of the pyramids. In this method, the authors set λ as 5 and 10 to test the models. The star models are defined by a coarse root filter and as previously discussed, approximately cover the entire object, while the higher resolution part filters cover the smaller parts of the object.

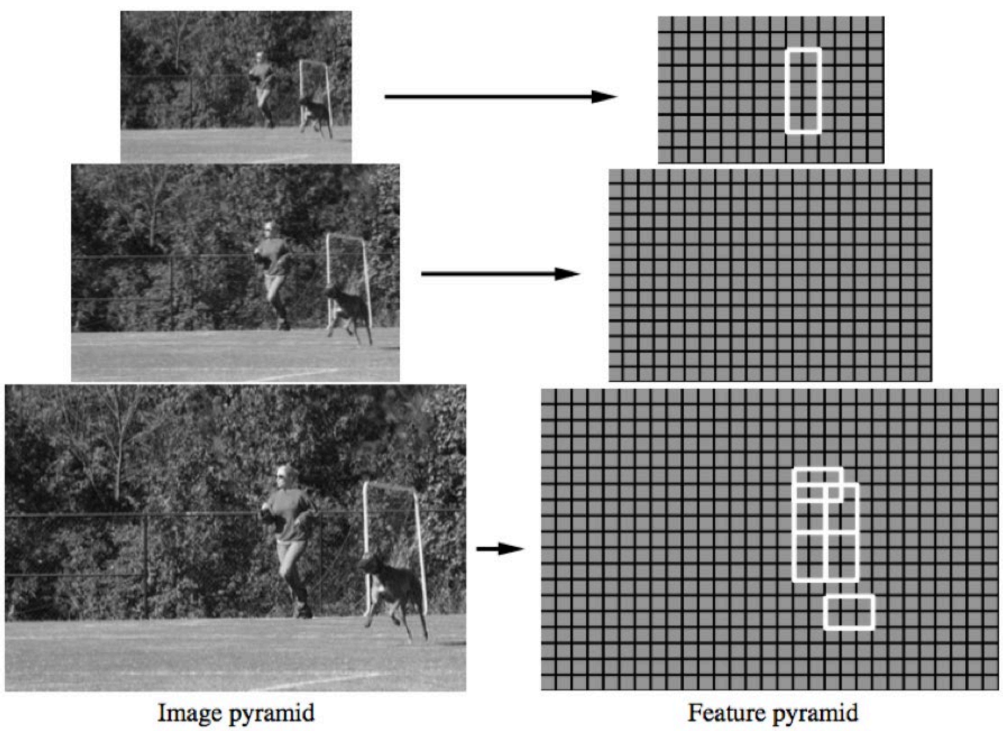


Figure 1
Feature pyramid of a person model

The root filter location defines a detection window. The score of a hypothesis is defined by the difference of the scores of each filter at their respective locations and a deformation cost that depends on the relative position of each part with respect to the root plus a bias:

$$score = \sum_{i=0}^{n} F_i' \cdot \emptyset(H, p_i) - \sum_{i=1}^{n} d_i \cdot \emptyset_d(dx_i, dy_i) + b \quad (4)$$

where,

$$(dx_i, dy_i) = (x_i, y_i) - (2(x_0, y_0) + v_i) \quad (5)$$

is the displacement of the i-th part relative to its root position and consists of the deformation features as shown below:

$$\emptyset_d(dx, dy) = (dx, dy, dx^2, dy^2) \quad (6)$$

An overall score is computed for each root location according to the best possible placement of the parts by choosing the maximum score to detect objects,

$$score(p_0) = \max_{p_1, \ldots p_n} score(p_0, p_1, \ldots p_n) \quad (7)$$

In order to learn models of objects, the authors use a latent SVM classifier. Assume a classifier that scores an example x with a function of the form:

$$f_\beta(x) = \max_{z \in Z(x)} \beta \cdot \Phi(x, z) \quad (8)$$

where, β is a vector of model parameters and the set $Z(x)$ consists of the possible latent values for an example x. β is trained from labeled examples $E = (< x_1, y_1 >, \ldots, < x_n, y_n >)$, where $y_i \in \{-1,1\}$, by minimizing the objective function:

$$L_D(\beta) = \frac{1}{2}\|\beta\|^2 + C \sum_{i=1}^{n} \max\left(0, 1 - y_i f_\beta(x_i)\right) \quad (9)$$

where, $\max\left(0, 1 - y_i f_\beta(x_i)\right)$ is the standard hinge loss and the constant C controls the relative weight of the regulation term.

Felzenszwalb et al. also introduced a 13-dimentional HOG feature set that includes both contrast sensitive and contrast insensitive features, ultimately improving performances for most classes of the PASCAL datasets. After HOG feature vectors are retrieved, a PCA was performed on these vectors to convert the values into a set of values of linearly uncorrelated variables. The use of lower dimensional features leads to models containing fewer parameters and speeds up the detection and training algorithm.

The goal in the PASCAL datasets is to predict the bounding boxes of objects. In this method, the authors utilize the configuration of an object hypothesis, z, to predict a bounding box for objects. It is implemented by using a function $c(z)$, to the upper-left and lower-right corners of the bounding box. The limitation of this method is that it does not consider deeper part hierarchies (parts within parts) or models with many components. This study chose the part-based method because it relies heavily on efficient methods for matching deformable models to images and the resulting output is generally accurate.

Data Description and Analysis

Site Selection

Five locations in Baton Rouge, LA, were chosen as the source of this project's video data. The sites were filmed daily to ensure that the footage was obtained for morning, afternoon, and evening hours. These locations had varying characteristics and densities of pedestrians and cyclists. Four of these sites were located near or on LSU campus as it was expected these locations would have fairly high volumes of pedestrians and cyclists. A brief description of each of the sites is given below.

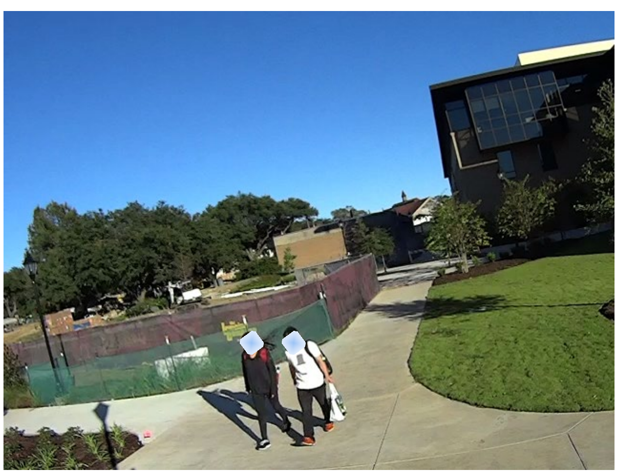
Site 1: Government Street. This site, as shown in Figure 2, was located along Government Street, Baton Rouge. The site included a bike lane as well as a sidewalk. The review of video footage showed that this site had a very low density of both pedestrians and cyclists.

Figure 2
Pedestrian and cyclist at Site 1 Government Street

Site 2: Dalrymple Drive. The camera on this site was placed facing a crosswalk at the intersection of Highland Road and Dalrymple Drive. This site, shown in Figure 3, recorded a decent number of pedestrians on the route as well as plenty of cyclists.

Figure 3
Pedestrians and cyclist at Site 2 Dalrymple Drive

Site 3: CEBA Lane. The camera system on this site was set up facing the entrance of Patrick F. Taylor Hall (PFT) on the LSU campus, as seen in Figure 4. This site experienced heavy volumes of pedestrians, with the numbers peaking during class hours of the students. The number of cyclists observed in this site was limited however.



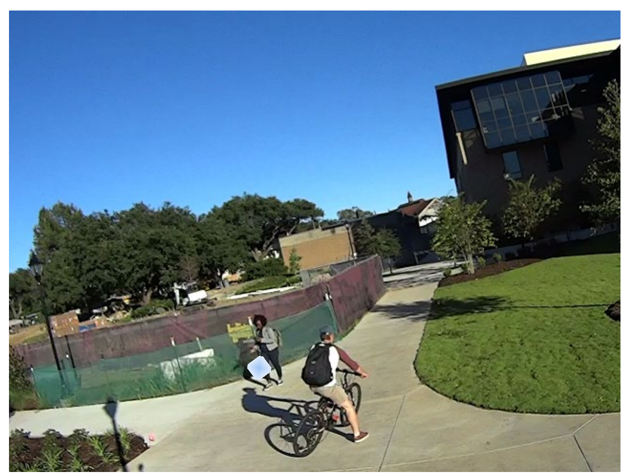


Figure 4
Pedestrians and cyclist at Site 3 CEBA Lane

Site 4: Nicholson Extension. The camera system was set up facing a crosswalk on Nicholson Drive Extension as shown in Figure 5. One side of the roadway had a major commuter parking lot and the other connected both the LSU Business Education Complex and Patrick F. Taylor Hall with walkways.

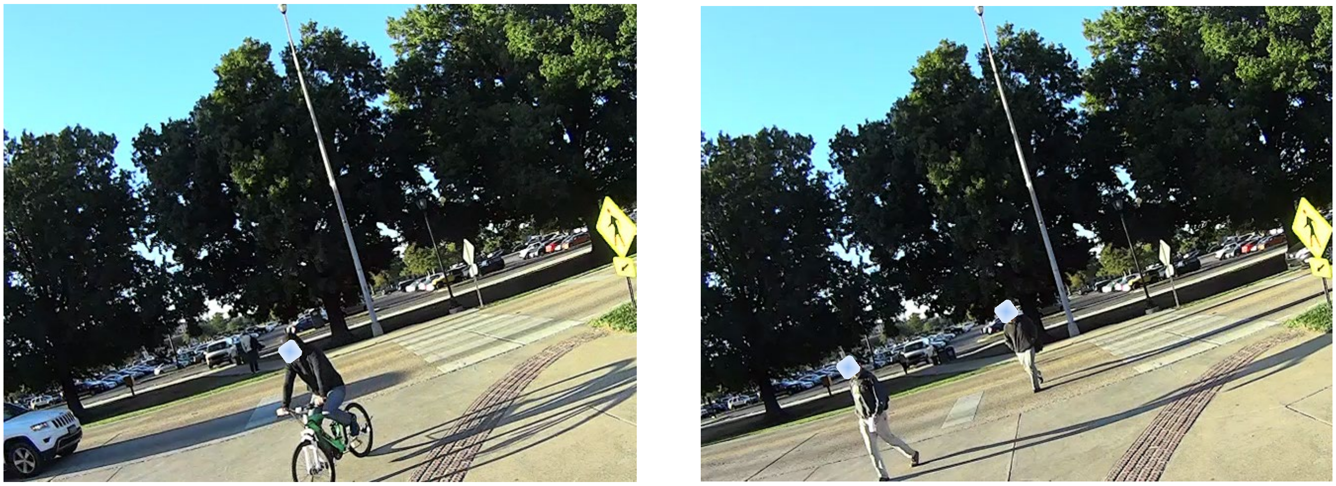


Figure 5
Pedestrians and cyclist at Site 4 Nicholson Drive Extension

Site 5: Student Union. The camera system was set up facing a cross walk in between the Student Union and the Barnes & Noble as shown in Figure 6. This site experienced a considerable amount of pedestrians as it was a street intersection between the campus and busy road. The number of cyclists though were limited.

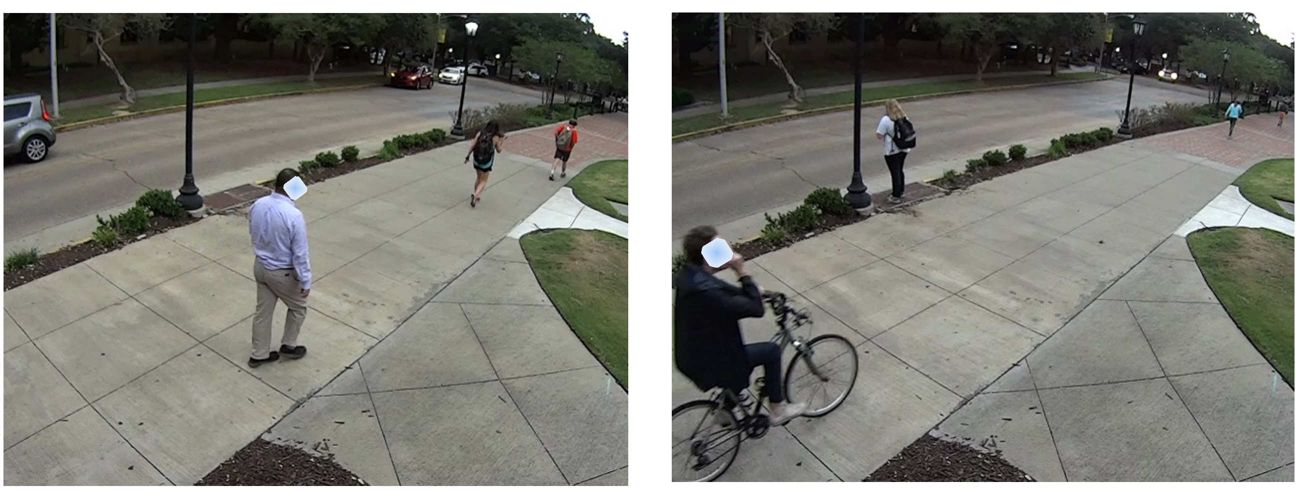


Figure 6
Pedestrians and cyclist at Site 5 Student Union

Two weather conditions occurred during the study which were either clear weather or rain. Additionally, the algorithm was tested for three lighting conditions: daytime, nighttime and twilight. The pedestrian and cyclist densities of the sites are tabulated in Table 1.

Table 1
Site pedestrian and cyclist densities

Location Name	Density of Pedestrians	Density of Cyclists
Site 1	Low	Low
Site 2	Medium	High
Site 3	High	Low
Site 4	High	Medium
Site 5	High	Low

Camera System Implementation
The camera system used in this study is JAMAR Portable Video Camera System (Serial Number: 201702001) and has a 64GB memory capacity for each filming. It can capture approximately 2 days of continuous footage with a standard resolution of 640 x 480 pixels and 4 to 9 hours with highest resolution at 1920 x 1080 pixels. This project utilized the standard resolution mode for capturing the video data. The height at which the camera is mounted on the pole was an average of 5.41 ft. and at an angle of 65-75 degrees from the pole for all sites.

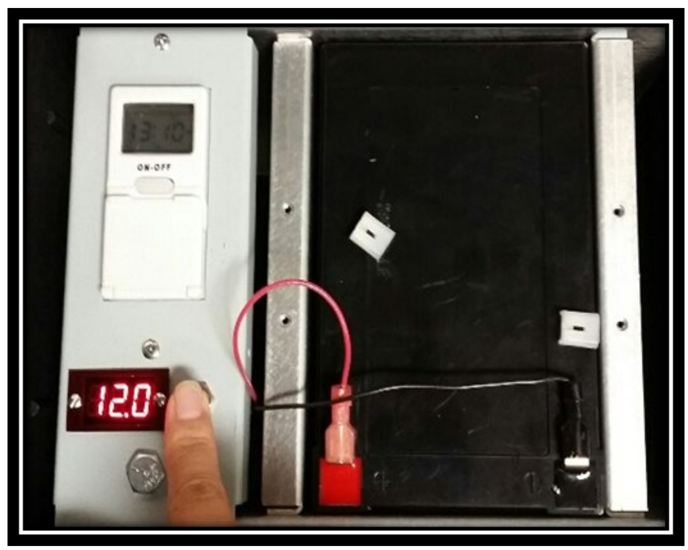
The following is an itemized list of the components for the camera system including images as seen in Figure 7.

1. Pole mount
2. 12V Battery and Timer
3. Horus view camera
4. Battery
5. Hose clamp set
6. Battery Charger
7. Cable that connects the battery to the camera

(a) Pole Mount

(b) 12V Battery and Timer

(c) Horus View Camera



(d) Checking the Power of Battery

(e) Steel Hose Clamp

(f) Battery Charger

Figure 7
Camera system set-up

Data Collection

Data in the form of recorded video footage was collected using the camera system set-up at all five locations. The video data was captured on a 24-hour basis. To be able to utilize HOG on the videos, all three steps need to be employed: detection, tracking, and classification. However, because of the limited time of the study, the research team focused solely on the detection element of the HOG algorithm.

Manual observation counts were used to provide the ground truth data for validation of the performance of the HOG technique. For each frame developed from the video footage, two research team members manually counted and recorded the number of pedestrians and cyclists to reduce possible errors due to human factors. The manual observations were compared with results of the HOG algorithm. Figures 8 and 9 show frames with HOG detection of pedestrians and cyclists respectively. Table 2 shows a truncated sample of how the counted data were compiled for one site. Appendix A presents compiled data for each of the sites.

Data Analysis

To determine the accuracy of the HOG algorithm in accurately detecting pedestrians and cyclists in each video frame, the accuracy rate was calculated as follows:

$$Accuracy\ Rate = \left|\frac{\#\ HOG\ Algorithm}{\#\ \text{Manually Counted}}\right| * 100\% \qquad (10)$$

where, # HOG Algorithm refers to the number of pedestrians or cyclists that were detected, using the HOG algorithm, in all the frames for each site; and # Manually Counted refers to the corresponding ground truth data. The closer the calculated Accuracy Rate is to 100%, the better the detection accuracy rate of the HOG algorithm.

Figure 8
HOG detection of pedestrian

Figure 9
HOG detection of cyclist

Table 2
Truncated presentation of compiled counts

		Manual Counting		HOG Algorithm	
FRAME NUMBER	FRAME CODE	#PEDESTRIANS	#CYCLIST	#PEDESTRIANS	#CYCLIST
FRAME 1	scene09265	1	0	0	0
FRAME 2	scene09277	1	0	0	0
FRAME 3	scene09289	1	0	0	0
FRAME 4	scene09301	1	0	0	0
FRAME 5	scene09313	1	0	0	0
FRAME 6	scene64249	1	0	1	0
FRAME 7	scene64261	1	0	1	0
FRAME 8	scene64273	1	0	0	0
FRAME 9	scene64285	1	0	1	0
FRAME 10	scene64297	1	0	0	0

DISCUSSION OF RESULTS

The accuracy rates of the HOG algorithm in detecting pedestrians and cyclists at the different locations are presented in Table 3.

Table 3
Accuracy rates of pedestrian and cyclist detection at different sites

		PEDESTRIANS			CYCLISTS		
Site	Number of frames	Manually Counted	HOG Algorithm	Accuracy Rate	Manually Counted	HOG Algorithm	Accuracy Rate
1	54	40	30	75%	14	0	0
2	480	856	541	63%	62	37	60%
3	365	582	171	29%	15	0	0
4	221	305	277	91%	0	0	N/A
5	278	495	374	76%	9	2	22%

Overall, it can be seen that the accuracy rates ranged between 29 – 91% for detection of pedestrians, and between 0 – 60% for cyclists. This result was fairly poor but can be attributed to a number of reasons, such as occlusion, lighting condition and viewpoint angle of the camera.

The viewpoint angle was a major factor affecting the accuracy of the results. A consistent angle of mounting of camera is required for better accuracy. Another contributing factor for low accuracy rates is the rich background. This study was performed in the real environment, such as busy street, parking lot, and so on. It is possible for objects such as trees and poles to be detected as human beings. However, this did not appear to be a factor for this study as the algorithm under counted both pedestrians and cyclists.

Occlusion can also affect the accuracy rates of detection. When there are several people passing by the camera at the same time, some of them may not be detected or several of them may be detected as just one person if they are very close to each other. This is because low number of features could be detected in this case. Table 4 shows that occlusion could be a problem with this study as it can be seen that higher number of pedestrians in a frame resulted in poorer accuracy rates.

Lighting condition can also cause inaccuracy of detection. If the light is not bright enough, the pedestrian in the scene is not clear enough to be detected. In the future, the research team hope to add a tracking element to count the number of pedestrians and cyclists. Tracking and counting will improve the performance of the algorithm.

While the overall accuracy rate of the HOG algorithm in detecting pedestrians and cyclists were poor, the research team investigated the effect of the density of pedestrians/cyclists on each frame to the accuracy rate. Tables 4 and 5 present the results of this exercise for pedestrians and cyclists respectively.

Table 4
Accuracy rates of pedestrian detection at different pedestrian densities

Density	Number of Frames	Manually Counted	HOG Algorithm	Accuracy Rate
1	786	786	624	79%
2	379	758	414	55%
3	112	336	170	51%
4	28	112	55	49%
5	24	120	74	62%
6	16	96	46	48%
7	2	14	4	29%
8	7	56	6	11%

Table 4 shows that generally, the higher the number of pedestrians on a frame, the poorer the accuracy rate. Table 5 shows no trend and it could be because of the very limited density recorded on each frame as a result of the very low cyclist population of the sites investigated.

Table 5
Accuracy rates of cyclist detection at different cyclist densities

Density	Number of Frames	Manually Counted	HOG Algorithm	Accuracy Rate
1	89	89	32	36%
2	4	8	6	75%
3	1	3	1	33%

CONCLUSIONS

The overall conclusion to be drawn from the literature and results is that automated data collection via video and image processing technology has grown to be an effective and feasible method for counting pedestrians and cyclists. While the collection of studies on newer technologies is not as robust as that of traditional ones, there is enough evidence to justify and guide the use of automated video count technology. To date, most researchers have developed unique algorithms and products in service to their agency or research goals rather than strictly replicating other methods to improve existing algorithm and deploy on a wide scale. Further research into using existing cameras, rather than new cameras, for collecting video data would be most beneficial as leveraging these sources could prove a huge benefit in terms of time and cost. Perfecting this method of automated data collection would greatly expand an already exciting technology growing in capacity. The implications of having a tested and efficient automated video-based count program will allow planners to add this method of data collection when deciding on research methods for count programs, and policymakers can trust the results in their decision-making.

This study aimed at developing such a system for pedestrian and cyclist detection. However, the limited study time meant that the research team focused on the detection part of the algorithm. A fully developed algorithm will be capable of detecting, tracking, and counting accurately. This study involved breaking video footage into subsequent frames and then utilizing the part-based method suggested by Felzenszwalb et al. for detecting the objects in the frames. The method relied heavily on exploiting the technique of HOG as well as a latent SVM classifier. The results of the pedestrian detection ranged between 29-91% and that of the cyclist detection spanned between 0-60%. The results showcase a method which is efficient in terms of development within a limited time frame, despite having compromised accuracy. In the future, the research team plans to enrich the models in order to improve the accuracy rate. This feat would involve training the algorithm with a dataset considering various instances of true positives or various viewpoints of pedestrians and cyclists, as well as false positives such as background trees, buildings etc. In addition, the research team would like to add pedestrian-tracking and cyclist-tracking to the algorithm for counting. Tracking can also improve the accuracy rate significantly since from the tested data, the same object or person can be detected at some frames while not at other frames while being continuously extracted from the footage. Tracking would improve the results by capturing and storing the location of the object over successive frames.

RECOMMENDATIONS

The research team recommends continuing this study in order to get acceptable accuracy for pedestrians and cyclist counts. Different scenarios should be considered and implemented to perform an accurate multi-object detection. Different light intensities, different video capturing time period, various motion patterns of tracked objects, and complex background are examples of such scenarios. In order to get an accurate pedestrians and cyclist counts, an accurate multi-object tracking algorithm should be added to avoid any false positive count process. An algorithm performing all of these operations will consume much time. Therefore, selecting high speed algorithms is the target of future work in order to be able to use the algorithm online to count pedestrians and cyclist. The final prototype that should be the aim to have in the future, is a remote-online program that can make an online count process 100% automated. This will save much effort and time when compared to traditional manual count processes.

ACRONYMS, ABREVIATIONS, AND SYMBOLS

BPNN	Backpropagation Neural Network
CV	Computer Vision
DOTD	Louisiana Department of Transportation and Development
GMM	Gaussian Mixture Model
HOG	Histogram of Oriented Gradient
KF	Kalman Filter
LSU	Louisiana State University
LTRC	Louisiana Transportation Research Center
MPO	Metropolitan Planning Organization
PCA	Principle Component Analysis
PFT	Patrick F. Taylor Hall
PRC	Project Review Committee
SVM	Support Vector Machine
YOLO	You Only Look Once

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APPENDIX

A. Detailed Compilation of Counts

LOCATION: SITE 1 (GOVERNMENT STREET- BATON ROUGE)					
FOLDER NUMBER: 742					
DATE AND TIME: Monday, October 23, 2017, 5:56:10 PM					
WEATHER: No Rain					
TOTAL HOURS: 2					
TOTAL NUMBER OF FRAMES: 54					
		Manual Counting		Algorithm detected	
FRAME NUMBER	FRAME CODE	# OF PEDESTRIANS	# OF CYCLIST	# OF PEDESTRIANS	# OF CYCLIST
FRAME 1	scene09265	1	0	0	0
FRAME 2	scene09277	1	0	0	0
FRAME 3	scene09289	1	0	0	0
FRAME 4	scene09301	1	0	0	0
FRAME 5	scene09313	1	0	0	0
FRAME 6	scene64249	1	0	1	0
FRAME 7	scene64261	1	0	1	0
FRAME 8	scene64273	1	0	0	0
FRAME 9	scene64285	1	0	1	0
FRAME 10	scene64297	1	0	0	0
FRAME 11	scene64309	1	0	1	0
FRAME 12	scene64321	1	0	1	0
FRAME 13	scene64333	1	0	1	0
FRAME 14	scene64345	1	0	1	0
FRAME 15	scene64357	1	0	0	0
FRAME 16	scene64369	1	0	0	0
FRAME 17	scene64381	1	0	1	0
FRAME 18	scene64393	1	0	1	0
FRAME 19	scene64405	1	0	1	0
FRAME 20	scene64417	1	0	1	0
FRAME 21	scene64429	1	0	1	0
FRAME 22	scene64441	1	0	1	0
FRAME 23	scene64453	1	0	1	0
FRAME 24	scene64465	1	0	1	0
FRAME 25	scene64477	1	0	0	0
FRAME 26	scene129757	0	1	0	0
FRAME 27	scene129769	0	1	0	0
FRAME 28	scene129781	0	1	0	0
FRAME 29	scene129793	0	1	0	0

LOCATION: SITE 1 (GOVERNMENT STREET- BATON ROUGE)					
FRAME 30	scene129805	0	1	0	0
FRAME 31	scene129817	0	1	0	0
FRAME 32	scene129829	0	1	0	0
FRAME 33	scene145393	0	1	0	0
FRAME 34	scene145405	0	1	0	0
FRAME 35	scene145417	0	1	0	0
FRAME 36	scene145429	0	1	0	0
FRAME 37	scene145441	0	1	0	0
FRAME 38	scene145453	0	1	0	0
FRAME 39	scene145465	0	1	0	0
FRAME 40	scene159337	1	0	1	0
FRAME 41	scene159349	1	0	1	0
FRAME 42	scene159361	1	0	1	0
FRAME 43	scene159373	1	0	1	0
FRAME 44	scene159385	1	0	1	0
FRAME 45	scene159397	1	0	1	0
FRAME 46	scene159409	1	0	1	0
FRAME 47	scene159421	1	0	1	0
FRAME 48	scene159433	1	0	1	0
FRAME 49	scene159445	1	0	1	0
FRAME 50	scene159457	1	0	1	0
FRAME 51	scene159469	1	0	1	0
FRAME 52	scene159481	1	0	1	0
FRAME 53	scene159493	1	0	1	0
FRAME 54	scene159505	1	0	1	0

LOCATION: SITE 2 (DARYMPLE)					
FOLDER NUMBER: 219-(1)					
DATE AND TIME: Wednesday, October 25, 2017, 4:40:34 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 480					
				Manual Counting	Algorithm Detected

FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 1	scene06721	1	0	1	0
FRAME 2	scene06733	1	0	0	0
FRAME 3	scene06745	1	0	1	0
FRAME 4	scene06757	1	0	0	0
FRAME 5	scene08305	1	0	1	0
FRAME 6	scene08317	1	0	1	0
FRAME 7	scene08329	1	0	1	0
FRAME 8	scene08341	1	0	1	0
FRAME 9	scene08353	1	0	1	0
FRAME 10	scene08365	1	0	1	0
FRAME 11	scene08377	1	0	1	0
FRAME 12	scene15013	1	0	1	0
FRAME 13	scene15025	1	0	1	0
FRAME 14	scene15037	1	0	1	0
FRAME 15	scene15181	1	0	2	0
FRAME 16	scene15193	1	0	1	0
FRAME 17	scene15205	1	0	0	0
FRAME 18	scene15217	1	0	1	0
FRAME 19	scene15229	1	0	0	0
FRAME 20	scene15373	2	0	0	0
FRAME 21	scene15385	2	0	1	0
FRAME 22	scene15469	2	0	1	0
FRAME 23	scene15481	2	0	2	0
FRAME 24	scene15493	2	0	2	0
FRAME 25	scene15505	2	0	1	0
FRAME 26	scene15517	2	0	1	0
FRAME 27	scene15529	2	0	1	0
FRAME 28	scene15541	2	0	2	0
FRAME 29	scene15553	2	0	1	0
FRAME 30	scene15565	2	0	1	0
FRAME 31	scene15577	2	0	1	0
FRAME 32	scene15589	2	0	1	0
FRAME 33	scene15601	2	0	1	0
FRAME 34	scene17053	2	0	2	0
FRAME 35	scene17185	2	0	2	0
FRAME 36	scene17197	2	0	1	0
FRAME 37	scene17209	2	0	1	0
FRAME 38	scene17221	2	0	2	0
FRAME 39	scene17233	2	0	1	0
FRAME 40	scene17305	1	0	1	0
FRAME 41	scene17317	1	0	1	0
FRAME 42	scene17329	1	0	1	0
FRAME 43	scene17341	1	0	1	0

LOCATION: SITE 2 (DARYMPLE)

FOLDER NUMBER: 219-(1)

DATE AND TIME: Wednesday, October 25, 2017, 4:40:34 PM

WEATHER: No Rain

TOTAL HOURS: 1

TOTAL NUMBER OF FRAMES: 480

		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 44	scene17377	1	0	1	0
FRAME 45	scene17389	1	0	1	0
FRAME 46	scene17401	1	0	1	0
FRAME 47	scene17473	1	0	1	0
FRAME 48	scene17617	1	0	1	0
FRAME 49	scene17629	1	0	0	0
FRAME 50	scene17641	1	0	0	0
FRAME 51	scene17653	1	0	0	0
FRAME 52	scene17833	0	1	0	1
FRAME 53	scene17845	0	1	0	1
FRAME 54	scene17857	0	1	0	1
FRAME 55	scene17869	0	1	0	1
FRAME 56	scene17881	0	1	0	1
FRAME 57	scene18745	1	0	0	0
FRAME 58	scene18757	1	0	0	0
FRAME 59	scene18769	1	0	1	0
FRAME 60	scene18781	1	0	1	0
FRAME 61	scene18793	1	0	1	0
FRAME 62	scene18805	1	0	0	0
FRAME 63	scene18817	1	0	0	0
FRAME 64	scene18829	1	0	1	0
FRAME 65	scene21841	1	0	1	0
FRAME 66	scene21853	1	0	2	0
FRAME 67	scene21865	1	0	1	0
FRAME 68	scene21877	1	0	1	0
FRAME 69	scene22177	0	1	0	1
FRAME 70	scene22189	0	1	0	1
FRAME 71	scene22201	0	1	0	1
FRAME 72	scene22465	1	0	1	0
FRAME 73	scene22477	1	0	1	0
FRAME 74	scene22489	1	0	0	0
FRAME 75	scene22501	1	0	0	0

LOCATION: SITE 2 (DARYMPLE)					
FOLDER NUMBER: 219-(1)					
DATE AND TIME: Wednesday, October 25, 2017, 4:40:34 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 480					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 76	scene22513	1	0	1	0
FRAME 77	scene22525	1	0	0	0
FRAME 78	scene22537	1	0	1	0
FRAME 79	scene27013	3	0	0	0
FRAME 80	scene27025	3	0	0	0
FRAME 81	scene27037	3	0	0	0
FRAME 82	scene27049	3	0	0	0
FRAME 83	scene27061	3	0	2	0
FRAME 84	scene27073	3	0	1	0
FRAME 85	scene27085	1	0	1	0
FRAME 86	scene27097	1	0	1	0
FRAME 87	scene27109	1	0	1	0
FRAME 88	scene27121	2	0	1	0
FRAME 89	scene27373	1	0	0	0
FRAME 90	scene27385	1	0	1	0
FRAME 91	scene27397	1	0	1	0
FRAME 92	scene27409	1	0	1	0
FRAME 93	scene27421	1	0	0	0
FRAME 94	scene27433	1	0	0	0
FRAME 95	scene27445	1	0	1	0
FRAME 96	scene27541	1	0	1	0
FRAME 97	scene27553	1	0	1	0
FRAME 98	scene27565	1	0	1	0
FRAME 99	scene27577	1	0	1	0
FRAME 100	scene27613	1	0	1	0
FRAME 101	scene27625	1	0	1	0
FRAME 102	scene27661	1	0	1	0
FRAME 103	scene27673	1	0	1	0
FRAME 104	scene27685	1	0	1	0
FRAME 105	scene27697	1	0	1	0
FRAME 106	scene27709	1	0	1	0
FRAME 107	scene27721	1	0	1	0

LOCATION: SITE 2 (DARYMPLE)

FOLDER NUMBER: 219-(1)

DATE AND TIME: Wednesday, October 25, 2017, 4:40:34 PM

WEATHER: No Rain

TOTAL HOURS: 1

TOTAL NUMBER OF FRAMES: 480

		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 108	scene27733	1	0	1	0
FRAME 109	scene27853	1	0	1	0
FRAME 110	scene27865	1	0	1	0
FRAME 111	scene27877	2	0	1	0
FRAME 112	scene28273	2	0	2	0
FRAME 113	scene28285	2	0	2	0
FRAME 114	scene28297	2	0	2	0
FRAME 115	scene28309	2	0	3	0
FRAME 116	scene28321	2	0	2	0
FRAME 117	scene28333	2	0	1	0
FRAME 118	scene29161	1	0	1	0
FRAME 119	scene29173	1	0	1	0
FRAME 120	scene29185	1	0	1	0
FRAME 121	scene29197	1	0	1	0
FRAME 122	scene29245	1	0	1	0
FRAME 123	scene29257	1	0	1	0
FRAME 124	scene29269	1	0	1	0
FRAME 125	scene29413	1	0	1	0
FRAME 126	scene29425	1	0	1	0
FRAME 127	scene29437	1	0	1	0
FRAME 128	scene29449	1	0	1	0
FRAME 129	scene29461	1	0	1	0
FRAME 130	scene29473	1	0	1	0
FRAME 131	scene29533	1	0	1	0
FRAME 132	scene29545	1	0	1	0
FRAME 133	scene29557	1	0	2	0
FRAME 134	scene29569	1	0	1	0
FRAME 135	scene29677	1	0	2	0
FRAME 136	scene29689	1	0	1	0
FRAME 137	scene29701	1	0	1	0
FRAME 138	scene29821	0	1	0	1
FRAME 139	scene29833	0	2	0	1

LOCATION: SITE 2 (DARYMPLE)					
FOLDER NUMBER: 219-(1)					
DATE AND TIME: Wednesday, October 25, 2017, 4:40:34 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 480					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 140	scene29845	0	3	0	1
FRAME 141	scene29857	0	2	0	2
FRAME 142	scene29869	0	2	0	2
FRAME 143	scene29881	0	2	0	1
FRAME 144	scene30133	1	0	1	0
FRAME 145	scene30145	1	0	1	0
FRAME 146	scene30157	1	0	1	0
FRAME 147	scene30181	1	0	1	0
FRAME 148	scene30193	1	0	1	0
FRAME 149	scene30973	1	0	1	0
FRAME 150	scene30985	1	0	1	0
FRAME 151	scene30997	1	0	1	0
FRAME 152	scene31009	1	0	1	0
FRAME 153	scene31021	1	0	0	0
FRAME 154	scene31033	1	0	1	0
FRAME 155	scene31045	1	0	1	0
FRAME 156	scene31441	2	0	0	0
FRAME 157	scene31453	2	0	1	0
FRAME 158	scene31465	2	0	1	0
FRAME 159	scene31477	2	0	0	0
FRAME 160	scene31489	2	0	0	0
FRAME 161	scene31501	2	0	1	0
FRAME 162	scene31513	2	0	0	0
FRAME 163	scene31561	2	0	0	0
FRAME 164	scene31573	2	0	0	0
FRAME 165	scene32257	1	0	1	0
FRAME 166	scene32269	2	0	1	0
FRAME 167	scene32281	2	0	1	0
FRAME 168	scene32293	2	0	1	0
FRAME 169	scene32305	2	0	1	0
FRAME 170	scene32317	2	0	0	0
FRAME 171	scene32329	2	0	1	0

LOCATION: SITE 2 (DARYMPLE)					
FOLDER NUMBER: 219-(1)					
DATE AND TIME: Wednesday, October 25, 2017, 4:40:34 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 480					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 172	scene32341	1	0	1	0
FRAME 173	scene32353	1	0	1	0
FRAME 174	scene32365	1	0	1	0
FRAME 175	scene32413	1	0	1	0
FRAME 176	scene36013	1	0	1	0
FRAME 177	scene36025	1	0	1	0
FRAME 178	scene36037	1	0	1	0
FRAME 179	scene36049	1	0	1	0
FRAME 180	scene36061	1	0	1	0
FRAME 181	scene36073	1	0	1	0
FRAME 182	scene36085	1	0	1	0
FRAME 183	scene36661	1	0	2	0
FRAME 184	scene36673	1	0	1	0
FRAME 185	scene36685	1	0	3	0
FRAME 186	scene36697	1	0	2	0
FRAME 187	scene36709	1	0	2	0
FRAME 188	scene40393	1	0	1	0
FRAME 189	scene40405	1	0	1	0
FRAME 190	scene40417	1	0	1	0
FRAME 191	scene40429	1	0	1	0
FRAME 192	scene41341	2	0	2	0
FRAME 193	scene41353	2	0	1	0
FRAME 194	scene41365	2	0	1	0
FRAME 195	scene41377	2	0	1	0
FRAME 196	scene41929	3	0	3	0
FRAME 197	scene42025	4	1	2	0
FRAME 198	scene42037	4	1	2	0
FRAME 199	scene42073	3	1	2	1
FRAME 200	scene42085	3	1	2	1
FRAME 201	scene42109	3	1	1	0
FRAME 202	scene42121	3	1	1	1
FRAME 203	scene42133	3	1	2	0

LOCATION: SITE 2 (DARYMPLE)					
FOLDER NUMBER: 219-(1)					
DATE AND TIME: Wednesday, October 25, 2017, 4:40:34 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 480					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 204	scene42145	3	1	1	0
FRAME 205	scene42157	2	1	1	1
FRAME 206	scene42169	2	1	1	1
FRAME 207	scene42181	3	1	1	1
FRAME 208	scene42277	4	1	2	0
FRAME 209	scene42289	4	1	2	0
FRAME 210	scene42337	5	1	3	0
FRAME 211	scene42349	6	1	2	1
FRAME 212	scene42361	6	1	3	1
FRAME 213	scene42373	6	1	3	1
FRAME 214	scene42385	6	1	3	1
FRAME 215	scene42397	5	1	3	1
FRAME 216	scene42409	6	1	2	1
FRAME 217	scene42421	4	1	3	1
FRAME 218	scene42481	4	1	0	0
FRAME 219	scene42493	4	1	3	0
FRAME 220	scene42505	6	1	5	0
FRAME 221	scene42517	6	1	4	0
FRAME 222	scene42529	6	1	2	0
FRAME 223	scene42541	6	1	4	0
FRAME 224	scene42553	5	1	3	0
FRAME 225	scene42565	6	1	4	1
FRAME 226	scene42577	4	1	3	1
FRAME 227	scene46405	1	0	1	0
FRAME 228	scene46417	1	0	1	0
FRAME 229	scene46429	1	0	1	0
FRAME 230	scene46441	1	0	1	0
FRAME 231	scene46453	1	0	1	0
FRAME 232	scene46465	1	0	0	0
FRAME 233	scene46537	1	0	1	0
FRAME 234	scene46549	1	0	1	0
FRAME 235	scene47293	1	0	1	0

LOCATION: SITE 2 (DARYMPLE)					
FOLDER NUMBER: 219-(1)					
DATE AND TIME: Wednesday, October 25, 2017, 4:40:34 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 480					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 236	scene47305	1	0	1	0
FRAME 237	scene47317	1	0	0	0
FRAME 238	scene47329	1	0	0	0
FRAME 239	scene47341	1	0	0	0
FRAME 240	scene48109	0	1	0	0
FRAME 241	scene48121	0	1	0	0
FRAME 242	scene48133	0	1	0	1
FRAME 243	scene48145	0	1	0	1
FRAME 244	scene48361	2	0	1	0
FRAME 245	scene48373	2	0	1	0
FRAME 246	scene48409	2	0	0	0
FRAME 247	scene48421	3	0	1	0
FRAME 248	scene48433	3	0	1	0
FRAME 249	scene48445	3	0	1	0
FRAME 250	scene48457	1	0	1	0
FRAME 251	scene48709	1	0	1	0
FRAME 252	scene48721	1	0	1	0
FRAME 253	scene48733	1	0	1	0
FRAME 254	scene48745	1	0	0	0
FRAME 255	scene48889	1	0	0	0
FRAME 256	scene48901	1	0	1	0
FRAME 257	scene48913	1	0	1	0
FRAME 258	scene48925	1	0	1	0
FRAME 259	scene48937	2	0	1	0
FRAME 260	scene48949	2	0	2	0
FRAME 261	scene48961	2	0	2	0
FRAME 262	scene48973	2	0	2	0
FRAME 263	scene49153	3	0	2	0
FRAME 264	scene49165	2	0	1	0
FRAME 265	scene49177	2	0	1	0
FRAME 266	scene49189	3	0	1	0
FRAME 267	scene49201	3	0	1	0

LOCATION: SITE 2 (DARYMPLE)			
FOLDER NUMBER: 219-(1)			
DATE AND TIME: Wednesday, October 25, 2017, 4:40:34 PM			
WEATHER: No Rain			
TOTAL HOURS: 1			
TOTAL NUMBER OF FRAMES: 480			

		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 268	scene49213	3	0	1	0
FRAME 269	scene49225	3	0	2	0
FRAME 270	scene49237	3	0	2	0
FRAME 271	scene49261	3	0	2	0
FRAME 272	scene49273	3	0	0	0
FRAME 273	scene49441	2	0	1	0
FRAME 274	scene49453	3	0	2	0
FRAME 275	scene49465	3	0	1	0
FRAME 276	scene49477	3	0	2	0
FRAME 277	scene49489	3	0	2	0
FRAME 278	scene49501	3	0	2	0
FRAME 279	scene49513	3	0	1	0
FRAME 280	scene50041	2	0	0	0
FRAME 281	scene50053	2	0	1	0
FRAME 282	scene50065	2	0	1	0
FRAME 283	scene50365	1	0	0	0
FRAME 284	scene50377	2	0	0	0
FRAME 285	scene50389	2	0	2	0
FRAME 286	scene50401	2	0	2	0
FRAME 287	scene50413	2	0	1	0
FRAME 288	scene50425	2	0	1	0
FRAME 289	scene50437	2	0	1	0
FRAME 290	scene50449	2	0	2	0
FRAME 291	scene50461	2	0	1	0
FRAME 292	scene50473	2	0	2	0
FRAME 293	scene50485	2	0	2	0
FRAME 294	scene50497	2	0	2	0
FRAME 295	scene53173	2	0	1	0
FRAME 296	scene53185	2	0	1	0
FRAME 297	scene53209	2	0	2	0
FRAME 298	scene53221	2	1	2	1
FRAME 299	scene53233	2	1	1	1

LOCATION: SITE 2 (DARYMPLE)					
FOLDER NUMBER: 219-(1)					
DATE AND TIME: Wednesday, October 25, 2017, 4:40:34 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 480					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 300	scene53245	2	1	1	1
FRAME 301	scene53257	2	0	2	0
FRAME 302	scene54781	2	0	1	0
FRAME 303	scene54793	2	0	1	0
FRAME 304	scene54805	2	0	1	0
FRAME 305	scene54817	2	0	1	0
FRAME 306	scene54829	2	0	2	0
FRAME 307	scene54841	1	0	1	0
FRAME 308	scene54877	1	0	0	0
FRAME 309	scene54889	1	0	0	0
FRAME 310	scene55609	2	0	1	0
FRAME 311	scene55621	2	0	1	0
FRAME 312	scene55633	2	0	2	0
FRAME 313	scene55645	2	0	1	0
FRAME 314	scene55657	2	0	1	0
FRAME 315	scene55669	2	0	1	0
FRAME 316	scene55681	2	0	1	0
FRAME 317	scene55753	1	0	0	0
FRAME 318	scene55897	1	0	0	0
FRAME 319	scene56101	2	1	1	0
FRAME 320	scene56113	2	1	1	0
FRAME 321	scene56221	1	0	1	0
FRAME 322	scene56233	1	0	1	0
FRAME 323	scene56245	1	0	1	0
FRAME 324	scene57361	1	0	1	0
FRAME 325	scene57373	1	0	1	0
FRAME 326	scene57385	1	0	1	0
FRAME 327	scene57397	1	0	2	0
FRAME 328	scene57409	1	0	1	0
FRAME 329	scene57421	1	0	0	0
FRAME 330	scene58945	2	0	1	0
FRAME 331	scene58957	1	0	1	0

LOCATION: SITE 2 (DARYMPLE)					
FOLDER NUMBER: 219-(1)					
DATE AND TIME: Wednesday, October 25, 2017, 4:40:34 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 480					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 332	scene58969	2	0	2	0
FRAME 333	scene58981	3	0	2	0
FRAME 334	scene58993	3	0	2	0
FRAME 335	scene59089	2	0	1	0
FRAME 336	scene59101	2	0	1	0
FRAME 337	scene59125	2	0	1	0
FRAME 338	scene59137	2	0	1	0
FRAME 339	scene59149	2	0	2	0
FRAME 340	scene59161	2	0	1	0
FRAME 341	scene59233	1	0	1	0
FRAME 342	scene59245	1	0	1	0
FRAME 343	scene59293	2	0	1	0
FRAME 344	scene59305	2	0	1	0
FRAME 345	scene59317	2	0	1	0
FRAME 346	scene59353	3	0	1	0
FRAME 347	scene59365	3	0	1	0
FRAME 348	scene59377	3	0	1	0
FRAME 349	scene59389	3	0	1	0
FRAME 350	scene59401	3	0	1	0
FRAME 351	scene59413	3	0	1	0
FRAME 352	scene59425	3	0	2	0
FRAME 353	scene59545	2	0	1	0
FRAME 354	scene59653	2	0	2	0
FRAME 355	scene59665	3	0	2	0
FRAME 356	scene59689	3	0	1	0
FRAME 357	scene59701	4	0	1	0
FRAME 358	scene59713	4	0	1	0
FRAME 359	scene59797	5	0	4	0
FRAME 360	scene59809	5	0	4	0
FRAME 361	scene59821	5	0	4	0
FRAME 362	scene59833	5	0	3	0
FRAME 363	scene59845	3	0	3	0

LOCATION: SITE 2 (DARYMPLE)					
FOLDER NUMBER: 219-(1)					
DATE AND TIME: Wednesday, October 25, 2017, 4:40:34 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 480					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 364	scene59857	3	0	3	0
FRAME 365	scene59869	2	0	1	0
FRAME 366	scene59881	1	0	1	0
FRAME 367	scene59893	1	0	1	0
FRAME 368	scene59917	2	0	1	0
FRAME 369	scene59929	2	0	1	0
FRAME 370	scene59941	2	0	1	0
FRAME 371	scene59989	2	0	1	0
FRAME 372	scene60001	2	0	1	0
FRAME 373	scene60085	2	0	2	0
FRAME 374	scene60097	2	0	2	0
FRAME 375	scene60109	2	0	2	0
FRAME 376	scene60121	2	0	2	0
FRAME 377	scene60133	2	0	2	0
FRAME 378	scene60145	2	0	2	0
FRAME 379	scene60193	2	0	2	0
FRAME 380	scene60205	2	0	1	0
FRAME 381	scene60217	2	0	1	0
FRAME 382	scene60229	2	0	1	0
FRAME 383	scene60241	2	0	1	0
FRAME 384	scene60253	2	0	2	0
FRAME 385	scene60265	2	0	2	0
FRAME 386	scene63865	1	0	1	0
FRAME 387	scene63877	1	0	1	0
FRAME 388	scene63889	1	0	0	0
FRAME 389	scene65113	2	0	1	0
FRAME 390	scene65125	2	0	1	0
FRAME 391	scene65137	3	0	2	0
FRAME 392	scene65149	3	0	3	0
FRAME 393	scene65161	3	0	3	0
FRAME 394	scene65173	3	0	3	0
FRAME 395	scene65185	3	0	1	0

LOCATION: SITE 2 (DARYMPLE)					
FOLDER NUMBER: 219-(1)					
DATE AND TIME: Wednesday, October 25, 2017, 4:40:34 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 480					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 396	scene65197	3	0	2	0
FRAME 397	scene65209	3	0	2	0
FRAME 398	scene66349	1	0	1	0
FRAME 399	scene66361	1	0	1	0
FRAME 400	scene66373	1	0	1	0
FRAME 401	scene66385	2	0	1	0
FRAME 402	scene66397	2	0	0	0
FRAME 403	scene66409	1	0	1	0
FRAME 404	scene67045	1	0	0	0
FRAME 405	scene67057	1	0	1	0
FRAME 406	scene67069	1	0	1	0
FRAME 407	scene67081	1	0	1	0
FRAME 408	scene67093	1	0	1	0
FRAME 409	scene67105	1	0	1	0
FRAME 410	scene67117	1	0	1	0
FRAME 411	scene67129	1	0	1	0
FRAME 412	scene67141	1	0	1	0
FRAME 413	scene67153	1	0	1	0
FRAME 414	scene67165	1	0	1	0
FRAME 415	scene67609	2	0	1	0
FRAME 416	scene67621	1	0	1	0
FRAME 417	scene67633	1	0	1	0
FRAME 418	scene67645	1	0	1	0
FRAME 419	scene67657	1	0	1	0
FRAME 420	scene67669	1	0	0	0
FRAME 421	scene69313	0	1	0	0
FRAME 422	scene69325	0	1	0	0
FRAME 423	scene69337	0	1	0	1
FRAME 424	scene70669	1	0	1	0
FRAME 425	scene70681	1	0	1	0
FRAME 426	scene70693	1	0	1	0
FRAME 427	scene70861	2	0	2	0

LOCATION: SITE 2 (DARYMPLE)					
FOLDER NUMBER: 219-(1)					
DATE AND TIME: Wednesday, October 25, 2017, 4:40:34 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 480					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 428	scene70873	2	0	2	0
FRAME 429	scene70885	2	0	1	0
FRAME 430	scene70897	1	0	1	0
FRAME 431	scene70909	1	0	1	0
FRAME 432	scene70921	1	0	1	0
FRAME 433	scene70933	1	0	0	0
FRAME 434	scene74377	3	0	3	0
FRAME 435	scene74389	3	0	2	0
FRAME 436	scene74401	2	0	1	0
FRAME 437	scene74413	2	0	0	0
FRAME 438	scene74425	2	0	1	0
FRAME 439	scene74437	2	0	1	0
FRAME 440	scene74473	2	0	2	0
FRAME 441	scene74485	2	0	1	0
FRAME 442	scene74497	2	0	1	0
FRAME 443	scene76873	2	0	1	0
FRAME 444	scene76875	2	0	1	0
FRAME 445	scene76897	2	0	0	0
FRAME 446	scene76909	1	0	0	0
FRAME 447	scene76921	2	0	1	0
FRAME 448	scene76933	2	0	1	0
FRAME 449	scene76945	2	0	1	0
FRAME 450	scene78085	1	0	0	0
FRAME 451	scene78097	1	0	1	0
FRAME 452	scene78109	1	0	1	0
FRAME 453	scene78121	1	0	1	0
FRAME 454	scene78385	3	0	1	0
FRAME 455	scene78397	3	0	1	0
FRAME 456	scene78409	3	0	1	0
FRAME 457	scene78421	3	0	1	0
FRAME 458	scene78433	2	0	2	0
FRAME 459	scene78445	4	0	2	0

LOCATION: SITE 2 (DARYMPLE)					
FOLDER NUMBER: 219-(1)					
DATE AND TIME: Wednesday, October 25, 2017, 4:40:34 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 480					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 460	scene78457	4	0	2	0
FRAME 461	scene78469	3	0	2	0
FRAME 462	scene78481	3	0	3	0
FRAME 463	scene78493	4	0	3	0
FRAME 464	scene78505	5	0	2	0
FRAME 465	scene78517	4	0	1	0
FRAME 466	scene78529	5	0	3	0
FRAME 467	scene78541	4	0	0	0
FRAME 468	scene82465	1	0	1	0
FRAME 469	scene82477	1	0	1	0
FRAME 470	scene82489	1	0	1	0
FRAME 471	scene82513	1	0	0	0
FRAME 472	scene82525	1	0	0	0
FRAME 473	scene82537	1	0	0	0
FRAME 474	scene82549	1	0	0	0
FRAME 475	scene82981	1	0	1	0
FRAME 476	scene82993	1	0	1	0
FRAME 477	scene83005	1	0	1	0
FRAME 478	scene83017	1	0	0	0
FRAME 479	scene83029	1	0	0	0
FRAME 480	scene83041	1	0	0	0

LOCATION: SITE 3 (CEBA)					
FOLDER NUMBER: 203 (1)					
DATE AND TIME: Monday, October 23, 2017, 7:42:18 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 365					
		Manul Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# OF PEDESTRIANS	#OF CYCLIST	# OF PEDESTRIANS	#OF CYCLIST
FRAME 1	scene01597	2	0	1	0
FRAME 2	scene01609	2	0	0	0
FRAME 3	scene01621	2	0	0	0
FRAME 4	scene01633	2	0	0	0
FRAME 5	scene01645	2	0	0	0
FRAME 6	scene01657	2	0	0	0
FRAME 7	scene01669	2	0	0	0
FRAME 8	scene01681	2	0	0	0
FRAME 9	scene01693	2	0	0	0
FRAME 10	scene01705	2	0	0	0
FRAME 11	scene01717	3	0	0	0
FRAME 12	scene01729	3	0	0	0
FRAME 13	scene01741	3	0	0	0
FRAME 14	scene01753	3	0	1	0
FRAME 15	scene01765	2	0	0	0
FRAME 16	scene01777	2	0	0	0
FRAME 17	scene01789	2	0	0	0
FRAME 18	scene01801	2	0	0	0
FRAME 19	scene01813	2	0	0	0
FRAME 20	scene01825	2	0	0	0
FRAME 21	scene01837	2	0	0	0
FRAME 22	scene01849	2	0	1	0
FRAME 23	scene01861	1	0	0	0
FRAME 24	scene01873	1	0	0	0
FRAME 25	scene01885	1	0	0	0
FRAME 26	scene01897	1	0	2	0
FRAME 27	scene01909	1	0	0	0
FRAME 28	scene01921	1	0	0	0
FRAME 29	scene01933	1	0	0	0
FRAME 30	scene01945	1	0	0	0
FRAME 31	scene02689	2	0	0	0

LOCATION: SITE 3 (CEBA)					
FOLDER NUMBER: 203 (1)					
DATE AND TIME: Monday, October 23, 2017, 7:42:18 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 365					
		Manul Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# OF PEDESTRIANS	#OF CYCLIST	# OF PEDESTRIANS	#OF CYCLIST
FRAME 32	scene02701	2	0	0	0
FRAME 33	scene02713	2	0	0	0
FRAME 34	scene02857	1	0	0	0
FRAME 35	scene03889	1	0	0	0
FRAME 36	scene03901	1	0	0	0
FRAME 37	scene03913	1	0	0	0
FRAME 38	scene04333	1	0	0	0
FRAME 39	scene04345	1	0	0	0
FRAME 40	scene04357	1	0	0	0
FRAME 41	scene05761	2	0	0	0
FRAME 42	scene05773	2	0	0	0
FRAME 43	scene05785	2	0	0	0
FRAME 44	scene05797	2	0	0	0
FRAME 45	scene05809	2	0	0	0
FRAME 46	scene05821	2	0	1	0
FRAME 47	scene05833	2	0	2	0
FRAME 48	scene05845	2	0	2	0
FRAME 49	scene05857	2	0	1	0
FRAME 50	scene05953	1	0	1	0
FRAME 51	scene05965	1	0	1	0
FRAME 52	scene05977	1	0	1	0
FRAME 53	scene05989	1	0	1	0
FRAME 54	scene07501	1	0	0	0
FRAME 55	scene08233	1	0	0	0
FRAME 56	scene08293	2	0	0	0
FRAME 57	scene08305	2	0	1	0
FRAME 58	scene08317	2	0	2	0
FRAME 59	scene08329	2	0	2	0
FRAME 60	scene08941	1	0	1	0
FRAME 61	scene08953	1	0	0	0
FRAME 62	scene09025	1	0	1	0
FRAME 63	scene09037	1	0	1	0

LOCATION: SITE 3 (CEBA)					
FOLDER NUMBER: 203 (1)					
DATE AND TIME: Monday, October 23, 2017, 7:42:18 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 365					
		Manul Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# OF PEDESTRIANS	#OF CYCLIST	# OF PEDESTRIANS	#OF CYCLIST
FRAME 64	scene09049	1	0	1	0
FRAME 65	scene10429	1	0	0	0
FRAME 66	scene10441	1	0	1	0
FRAME 67	scene10525	1	1	0	0
FRAME 68	scene10537	1	1	1	0
FRAME 69	scene10549	1	1	1	0
FRAME 70	scene10561	1	1	0	0
FRAME 71	scene10573	1	1	0	0
FRAME 72	scene10585	1	1	0	0
FRAME 73	scene10597	1	1	1	0
FRAME 74	scene10609	1	1	0	0
FRAME 75	scene10693	1	1	1	0
FRAME 76	scene11077	1	0	1	0
FRAME 77	scene11089	1	0	1	0
FRAME 78	scene11101	1	0	0	0
FRAME 79	scene11497	2	0	1	0
FRAME 80	scene11509	2	0	0	0
FRAME 81	scene11521	2	0	1	0
FRAME 82	scene11533	2	0	1	0
FRAME 83	scene11545	2	0	0	0
FRAME 84	scene11557	2	0	0	0
FRAME 85	scene12517	2	0	0	0
FRAME 86	scene12589	2	0	1	0
FRAME 87	scene12637	2	0	1	0
FRAME 88	scene12877	1	0	0	0
FRAME 89	scene12889	1	0	1	0
FRAME 90	scene12901	1	0	0	0
FRAME 91	scene13381	1	0	2	0
FRAME 92	scene13393	2	0	0	0
FRAME 93	scene13405	2	0	3	0
FRAME 94	scene13417	2	0	0	0
FRAME 95	scene13585	3	0	0	0

LOCATION: SITE 3 (CEBA)					
FOLDER NUMBER: 203 (1)					
DATE AND TIME: Monday, October 23, 2017, 7:42:18 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 365					
		Manul Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# OF PEDESTRIANS	#OF CYCLIST	# OF PEDESTRIANS	#OF CYCLIST
FRAME 96	scene13597	3	0	0	0
FRAME 97	scene13609	3	0	0	0
FRAME 98	scene14881	1	0	0	0
FRAME 99	scene14893	1	0	1	0
FRAME 100	scene14905	1	0	1	0
FRAME 101	scene14917	1	0	1	0
FRAME 102	scene14929	1	0	1	0
FRAME 103	scene16693	1	0	0	0
FRAME 104	scene16705	1	0	0	0
FRAME 105	scene16717	1	0	0	0
FRAME 106	scene17605	1	0	1	0
FRAME 107	scene17617	1	0	1	0
FRAME 108	scene17629	1	0	2	0
FRAME 109	scene17641	1	0	0	0
FRAME 110	scene19561	1	0	0	0
FRAME 111	scene19573	1	0	0	0
FRAME 112	scene19585	1	0	0	0
FRAME 113	scene19597	1	0	0	0
FRAME 114	scene19609	1	0	0	0
FRAME 115	scene19621	1	0	0	0
FRAME 116	scene19669	1	0	0	0
FRAME 117	scene19681	1	0	0	0
FRAME 118	scene20941	1	0	0	0
FRAME 119	scene20953	1	0	0	0
FRAME 120	scene20965	1	0	1	0
FRAME 121	scene20977	1	0	1	0
FRAME 122	scene22633	1	0	0	0
FRAME 123	scene22645	1	0	2	0
FRAME 124	scene22657	1	0	0	0
FRAME 125	scene22669	2	0	1	0
FRAME 126	scene22681	2	0	1	0
FRAME 127	scene22693	2	0	1	0

LOCATION: SITE 3 (CEBA)					
FOLDER NUMBER: 203 (1)					
DATE AND TIME: Monday, October 23, 2017, 7:42:18 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 365					
		Manul Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# OF PEDESTRIANS	#OF CYCLIST	# OF PEDESTRIANS	#OF CYCLIST
FRAME 128	scene22705	2	0	1	0
FRAME 129	scene22717	2	0	0	0
FRAME 130	scene22729	2	0	0	0
FRAME 131	scene22741	2	0	0	0
FRAME 132	scene22753	2	0	0	0
FRAME 133	scene23209	1	0	0	0
FRAME 134	scene23221	1	0	0	0
FRAME 135	scene24949	2	0	1	0
FRAME 136	scene24961	2	0	1	0
FRAME 137	scene24973	2	0	0	0
FRAME 138	scene24985	2	0	1	0
FRAME 139	scene24997	2	0	0	0
FRAME 140	scene25009	2	0	0	0
FRAME 141	scene25957	1	0	1	0
FRAME 142	scene25969	1	0	0	0
FRAME 143	scene25981	1	0	0	0
FRAME 144	scene25993	1	0	0	0
FRAME 145	scene26005	1	0	2	0
FRAME 146	scene26017	1	0	0	0
FRAME 147	scene28129	1	0	0	0
FRAME 148	scene28141	1	0	0	0
FRAME 149	scene28153	1	0	0	0
FRAME 150	scene28165	1	0	0	0
FRAME 151	scene28177	1	0	0	0
FRAME 152	scene28981	1	0	1	0
FRAME 153	scene28993	1	0	1	0
FRAME 154	scene29005	1	0	1	0
FRAME 155	scene29017	1	0	1	0
FRAME 156	scene29029	1	0	1	0
FRAME 157	scene29041	1	0	1	0
FRAME 158	scene29977	1	0	0	0
FRAME 159	scene29989	1	0	0	0

LOCATION: SITE 3 (CEBA)					
FOLDER NUMBER: 203 (1)					
DATE AND TIME: Monday, October 23, 2017, 7:42:18 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 365					
		Manul Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# OF PEDESTRIANS	#OF CYCLIST	# OF PEDESTRIANS	#OF CYCLIST
FRAME 160	scene30001	1	0	0	0
FRAME 161	scene32089	1	0	0	0
FRAME 162	scene32101	1	0	0	0
FRAME 163	scene32113	1	0	0	0
FRAME 164	scene32125	1	0	1	0
FRAME 165	scene32137	1	0	0	0
FRAME 166	scene32149	1	0	1	0
FRAME 167	scene32305	1	0	0	0
FRAME 168	scene32317	1	0	0	0
FRAME 169	scene32773	1	0	1	0
FRAME 170	scene32785	1	0	0	0
FRAME 171	scene32797	1	0	0	0
FRAME 172	scene32809	1	0	0	0
FRAME 173	scene32821	1	0	0	0
FRAME 174	scene34225	1	0	0	0
FRAME 175	scene34237	1	0	0	0
FRAME 176	scene34249	1	0	0	0
FRAME 177	scene34261	1	0	0	0
FRAME 178	scene34273	1	0	0	0
FRAME 179	scene34285	1	0	0	0
FRAME 180	scene34297	1	0	0	0
FRAME 181	scene34309	1	0	0	0
FRAME 182	scene34321	1	0	0	0
FRAME 183	scene34333	1	0	0	0
FRAME 184	scene34345	1	0	1	0
FRAME 185	scene34357	1	0	1	0
FRAME 186	scene34369	1	0	1	0
FRAME 187	scene34381	1	0	0	0
FRAME 188	scene34393	1	0	0	0
FRAME 189	scene34813	1	0	0	0
FRAME 190	scene34825	1	0	0	0
FRAME 191	scene35041	0	1	0	0

LOCATION: SITE 3 (CEBA)					
FOLDER NUMBER: 203 (1)					
DATE AND TIME: Monday, October 23, 2017, 7:42:18 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 365					
		Manul Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# OF PEDESTRIANS	#OF CYCLIST	# OF PEDESTRIANS	#OF CYCLIST
FRAME 192	scene35053	0	1	0	0
FRAME 193	scene35065	0	1	0	0
FRAME 194	scene35077	0	1	0	0
FRAME 195	scene35089	0	1	0	0
FRAME 196	scene35101	0	1	0	0
FRAME 197	scene36889	1	0	0	0
FRAME 198	scene36901	1	0	0	0
FRAME 199	scene36913	1	0	0	0
FRAME 200	scene36925	1	0	0	0
FRAME 201	scene36937	1	0	0	0
FRAME 202	scene36985	1	0	0	0
FRAME 203	scene36997	1	0	1	0
FRAME 204	scene37009	1	0	1	0
FRAME 205	scene38749	1	0	1	0
FRAME 206	scene38761	1	0	1	0
FRAME 207	scene38773	1	0	0	0
FRAME 208	scene38785	1	0	0	0
FRAME 209	scene40021	1	0	0	0
FRAME 210	scene40033	1	0	0	0
FRAME 211	scene40045	1	0	0	0
FRAME 212	scene40057	1	0	0	0
FRAME 213	scene40393	1	0	1	0
FRAME 214	scene40405	1	0	1	0
FRAME 215	scene40417	1	0	1	0
FRAME 216	scene40429	1	0	0	0
FRAME 217	scene40441	1	0	0	0
FRAME 218	scene40945	1	0	1	0
FRAME 219	scene40957	1	0	1	0
FRAME 220	scene40969	1	0	1	0
FRAME 221	scene42733	1	0	0	0
FRAME 222	scene42745	1	0	0	0
FRAME 223	scene42757	1	0	0	0

LOCATION: SITE 3 (CEBA)					
FOLDER NUMBER: 203 (1)					
DATE AND TIME: Monday, October 23, 2017, 7:42:18 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 365					
		Manul Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# OF PEDESTRIANS	#OF CYCLIST	# OF PEDESTRIANS	#OF CYCLIST
FRAME 224	scene43273	1	0	0	0
FRAME 225	scene43285	1	0	0	0
FRAME 226	scene43297	1	0	0	0
FRAME 227	scene43309	1	0	0	0
FRAME 228	scene43321	1	0	0	0
FRAME 229	scene43897	1	0	0	0
FRAME 230	scene43909	1	0	0	0
FRAME 231	scene43921	1	0	1	0
FRAME 232	scene43933	1	0	1	0
FRAME 233	scene43945	1	0	1	0
FRAME 234	scene43957	1	0	0	0
FRAME 235	scene43969	1	0	1	0
FRAME 236	scene44017	1	0	1	0
FRAME 237	scene44029	1	0	1	0
FRAME 238	scene44041	1	0	1	0
FRAME 239	scene44053	1	0	0	0
FRAME 240	scene44569	1	0	1	0
FRAME 241	scene44581	1	0	0	0
FRAME 242	scene44881	1	0	0	0
FRAME 243	scene44893	1	0	0	0
FRAME 244	scene45709	2	0	1	0
FRAME 245	scene45721	2	0	1	0
FRAME 246	scene45733	2	0	0	0
FRAME 247	scene45745	2	0	1	0
FRAME 248	scene45997	2	0	0	0
FRAME 249	scene46009	1	0	0	0
FRAME 250	scene47041	5	0	2	0
FRAME 251	scene47053	5	0	3	0
FRAME 252	scene47209	8	0	1	0
FRAME 253	scene47221	8	0	2	0
FRAME 254	scene47233	7	0	3	0
FRAME 255	scene47245	7	0	1	0

LOCATION: SITE 3 (CEBA)					
FOLDER NUMBER: 203 (1)					
DATE AND TIME: Monday, October 23, 2017, 7:42:18 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 365					
		Manul Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# OF PEDESTRIANS	#OF CYCLIST	# OF PEDESTRIANS	#OF CYCLIST
FRAME 256	scene47305	6	0	0	0
FRAME 257	scene47329	5	0	0	0
FRAME 258	scene47377	4	0	1	0
FRAME 259	scene47389	4	0	0	0
FRAME 260	scene47413	4	0	1	0
FRAME 261	scene47425	4	0	2	0
FRAME 262	scene47821	3	0	0	0
FRAME 263	scene47833	3	0	1	0
FRAME 264	scene47845	3	0	0	0
FRAME 265	scene47965	6	0	0	0
FRAME 266	scene48265	8	0	0	0
FRAME 267	scene48277	8	0	0	0
FRAME 268	scene48289	8	0	1	0
FRAME 269	scene48301	8	0	1	0
FRAME 270	scene48313	8	0	1	0
FRAME 271	scene49633	5	0	1	0
FRAME 272	scene49645	5	0	2	0
FRAME 273	scene50005	1	0	0	0
FRAME 274	scene50017	1	0	0	0
FRAME 275	scene50029	1	0	1	0
FRAME 276	sceme50785	2	0	1	0
FRAME 277	scene50797	2	0	0	0
FRAME 278	scene50809	2	0	0	0
FRAME 279	scene50821	2	0	0	0
FRAME 280	scene50905	2	0	0	0
FRAME 281	scene50917	2	0	0	0
FRAME 282	scene50929	2	0	0	0
FRAME 283	scene51217	1	0	1	0
FRAME 284	scene51229	1	0	1	0
FRAME 285	scene58093	2	0	0	0
FRAME 286	scene58105	2	0	0	0
FRAME 287	scene58117	2	0	0	0

LOCATION: SITE 3 (CEBA)					
FOLDER NUMBER: 203 (1)					
DATE AND TIME: Monday, October 23, 2017, 7:42:18 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 365					
		Manul Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# OF PEDESTRIANS	#OF CYCLIST	# OF PEDESTRIANS	#OF CYCLIST
FRAME 288	scene58429	1	0	1	0
FRAME 289	scene58441	1	0	1	0
FRAME 290	scene58453	1	0	1	0
FRAME 291	scene58489	1	0	1	0
FRAME 292	scene58501	1	0	0	0
FRAME 293	scene60481	2	0	0	0
FRAME 294	scene62893	1	0	0	0
FRAME 295	scene62905	1	0	0	0
FRAME 296	scene62917	1	0	0	0
FRAME 297	scene62929	1	0	0	0
FRAME 298	scene62941	1	0	0	0
FRAME 299	scene63769	1	0	0	0
FRAME 300	scene63781	1	0	1	0
FRAME 301	scene63793	1	0	1	0
FRAME 302	scene63805	1	0	1	0
FRAME 303	scene63817	1	0	1	0
FRAME 304	scene63925	2	0	1	0
FRAME 305	scene63937	2	0	1	0
FRAME 306	scene63949	2	0	0	0
FRAME 307	scene63961	2	0	0	0
FRAME 308	scene63973	2	0	0	0
FRAME 309	scene64741	1	0	0	0
FRAME 310	scene64753	1	0	1	0
FRAME 311	scene64765	1	0	1	0
FRAME 312	scene64777	1	0	1	0
FRAME 313	scene65209	1	0	0	0
FRAME 314	scene65233	1	0	0	0
FRAME 315	scene72529	1	0	0	0
FRAME 316	scene72541	1	0	1	0
FRAME 317	scene72553	1	0	1	0
FRAME 318	scene72997	1	0	0	0
FRAME 319	scene73009	1	0	1	0

LOCATION: SITE 3 (CEBA)					
FOLDER NUMBER: 203 (1)					
DATE AND TIME: Monday, October 23, 2017, 7:42:18 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 365					
		Manul Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# OF PEDESTRIANS	#OF CYCLIST	# OF PEDESTRIANS	#OF CYCLIST
FRAME 320	scene73201	1	0	0	0
FRAME 321	scene73225	1	0	1	0
FRAME 322	scene73237	1	0	1	0
FRAME 323	scene73249	1	0	1	0
FRAME 324	scene75193	1	0	1	0
FRAME 325	scene75205	1	0	0	0
FRAME 326	scene75217	1	0	1	0
FRAME 327	scene75229	1	0	1	0
FRAME 328	scene75241	1	0	1	0
FRAME 329	scene76141	2	0	0	0
FRAME 330	scene76153	2	0	0	0
FRAME 331	scene76165	2	0	1	0
FRAME 332	scene76177	2	0	2	0
FRAME 333	scene76189	2	0	2	0
FRAME 334	scene77773	1	0	0	0
FRAME 335	scene77785	1	0	1	0
FRAME 336	scene77797	1	0	1	0
FRAME 337	scene77809	1	0	1	0
FRAME 338	scene83737	2	0	1	0
FRAME 339	scene83749	2	0	0	0
FRAME 340	scene83761	2	0	1	0
FRAME 341	scene83773	2	0	0	0
FRAME 342	scene83785	2	0	2	0
FRAME 343	scene85789	2	0	0	0
FRAME 344	scene85801	2	0	0	0
FRAME 345	scene85813	2	0	0	0
FRAME 346	scene85825	2	0	0	0
FRAME 347	scene85837	2	0	0	0
FRAME 348	scene85873	2	0	1	0
FRAME 349	scene89017	1	0	1	0
FRAME 350	scene89029	1	0	1	0
FRAME 351	scene89041	1	0	1	0

LOCATION: SITE 3 (CEBA)					
FOLDER NUMBER: 203 (1)					
DATE AND TIME: Monday, October 23, 2017, 7:42:18 PM					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 365					
		Manul Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# OF PEDESTRIANS	#OF CYCLIST	# OF PEDESTRIANS	#OF CYCLIST
FRAME 352	scene89053	1	0	1	0
FRAME 353	scene89317	2	0	1	0
FRAME 354	scene89329	2	0	1	0
FRAME 355	scene89341	2	0	1	0
FRAME 356	scene89449	1	0	1	0
FRAME 357	scene89461	1	0	1	0
FRAME 358	scene89485	1	0	1	0
FRAME 359	scene89509	1	0	1	0
FRAME 360	scene89821	1	0	0	0
FRAME 361	scene89833	1	0	0	0
FRAME 362	scene89845	1	0	0	0
FRAME 363	scene89857	1	0	0	0
FRAME 364	scene89869	1	0	0	0
FRAME 365	scene89881	1	0	0	0

LOCATION: SITE 4 (NICHOLSON)					
FOLDER NUMBER: 820-5pm					
DATE AND TIME: Tuesday, November 21, 2017, 4:41:30pm					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 221					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 1	scene00085	1	0	1	0
FRAME 2	scene00097	1	0	0	0
FRAME 3	scene00193	4	0	4	0
FRAME 4	scene00229	1	0	1	0
FRAME 5	scene00445	1	0	0	0
FRAME 6	scene00457	1	0	0	0
FRAME 7	scene00469	1	0	0	0
FRAME 8	scene00925	1	0	1	0
FRAME 9	scene00937	1	0	1	0
FRAME 10	scene00949	1	0	1	0
FRAME 11	scene00961	1	0	1	0
FRAME 12	scene00973	1	0	0	0
FRAME 13	scene01021	1	0	1	0
FRAME 14	scene01033	1	0	1	0
FRAME 15	scene01045	1	0	1	0
FRAME 16	scene01057	1	0	1	0
FRAME 17	scene01201	2	0	1	0
FRAME 18	scene01213	2	0	3	0
FRAME 19	scene01225	2	0	2	0
FRAME 20	scene01237	2	0	3	0
FRAME 21	scene01249	1	0	1	0
FRAME 22	scene01261	1	0	1	0
FRAME 23	scene01273	1	0	1	0
FRAME 24	scene01285	1	0	1	0
FRAME 25	scene01297	1	0	1	0
FRAME 26	scene01309	1	0	1	0
FRAME 27	scene01321	1	0	1	0
FRAME 28	scene01333	1	0	0	0
FRAME 29	scene03637	1	0	0	0
FRAME 30	scene03649	1	0	1	0
FRAME 31	scene03661	1	0	0	0

LOCATION: SITE 4 (NICHOLSON)					
FOLDER NUMBER: 820-5pm					
DATE AND TIME: Tuesday, November 21, 2017, 4:41:30pm					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 221					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 32	scene03673	2	0	2	0
FRAME 33	scene03685	1	0	1	0
FRAME 34	scene03697	1	0	1	0
FRAME 35	scene03709	1	0	0	0
FRAME 36	scene03721	1	0	0	0
FRAME 37	scene03745	2	0	1	0
FRAME 38	scene03757	2	0	0	0
FRAME 39	scene03769	2	0	0	0
FRAME 40	scene03817	2	0	1	0
FRAME 41	scene03829	2	0	1	0
FRAME 42	scene03841	2	0	0	0
FRAME 43	scene03853	2	0	1	0
FRAME 44	scene03865	2	0	0	0
FRAME 45	scene03877	2	0	2	0
FRAME 46	scene03901	2	0	2	0
FRAME 47	scene03913	2	0	4	0
FRAME 48	scene03925	2	0	3	0
FRAME 49	scene03937	2	0	3	0
FRAME 50	scene03985	2	0	2	0
FRAME 51	scene03997	2	0	3	0
FRAME 52	scene04009	2	0	2	0
FRAME 53	scene04021	2	0	1	0
FRAME 54	scene04033	2	0	1	0
FRAME 55	scene04045	1	0	1	0
FRAME 56	scene04057	1	0	1	0
FRAME 57	scene04069	1	0	1	0
FRAME 58	scene04081	1	0	1	0
FRAME 59	scene04093	1	0	1	0
FRAME 60	scene04105	1	0	1	0
FRAME 61	scene04225	1	0	1	0
FRAME 62	scene04237	1	0	2	0
FRAME 63	scene04249	1	0	1	0
FRAME 64	scene04261	1	0	1	0

LOCATION: SITE 4 (NICHOLSON)					
FOLDER NUMBER: 820-5pm					
DATE AND TIME: Tuesday, November 21, 2017, 4:41:30pm					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 221					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 65	scene04273	1	0	1	0
FRAME 66	scene04285	1	0	1	0
FRAME 67	scene04297	1	0	1	0
FRAME 68	scene04309	1	0	1	0
FRAME 69	scene04321	1	0	1	0
FRAME 70	scene04333	1	0	2	0
FRAME 71	scene04345	1	0	2	0
FRAME 72	scene04357	1	0	1	0
FRAME 73	scene04369	1	0	2	0
FRAME 74	scene04381	1	0	1	0
FRAME 75	scene04393	1	0	1	0
FRAME 76	scene04429	1	0	1	0
FRAME 77	scene04441	1	0	1	0
FRAME 78	scene05161	1	0	0	0
FRAME 79	scene05173	2	0	0	0
FRAME 80	scene05209	2	0	1	0
FRAME 81	scene05221	2	0	1	0
FRAME 82	scene05233	2	0	2	0
FRAME 83	scene05245	2	0	2	0
FRAME 84	scene05257	3	0	3	0
FRAME 85	scene05269	2	0	2	0
FRAME 86	scene05533	2	0	0	0
FRAME 87	scene05545	2	0	0	0
FRAME 88	scene05557	2	0	0	0
FRAME 89	scene05569	2	0	2	0
FRAME 90	scene05581	2	0	1	0
FRAME 91	scene05593	2	0	1	0
FRAME 92	scene07585	1	0	0	0
FRAME 93	scene07597	1	0	0	0
FRAME 94	scene07609	1	0	2	0
FRAME 95	scene07621	1	0	1	0
FRAME 96	scene07657	1	0	2	0
FRAME 97	scene07669	1	0	1	0

LOCATION: SITE 4 (NICHOLSON)					
FOLDER NUMBER: 820-5pm					
DATE AND TIME: Tuesday, November 21, 2017, 4:41:30pm					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 221					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 98	scene07681	1	0	1	0
FRAME 99	scene07693	1	0	1	0
FRAME 100	scene07705	1	0	0	0
FRAME 101	scene07717	1	0	0	0
FRAME 102	scene07729	1	0	0	0
FRAME 103	scene07741	1	0	1	0
FRAME 104	scene08017	1	0	1	0
FRAME 105	scene08029	1	0	1	0
FRAME 106	scene08041	1	0	1	0
FRAME 107	scene08053	1	0	2	0
FRAME 108	scene08065	1	0	1	0
FRAME 109	scene08833	1	0	2	0
FRAME 110	scene08845	1	0	2	0
FRAME 111	scene08857	1	0	2	0
FRAME 112	scene08869	1	0	2	0
FRAME 113	scene08881	1	0	2	0
FRAME 114	scene08893	2	0	2	0
FRAME 115	scene08905	2	0	2	0
FRAME 116	scene08917	2	0	3	0
FRAME 117	scene08929	1	0	0	0
FRAME 118	scene09133	1	0	0	0
FRAME 119	scene09145	1	0	1	0
FRAME 120	scene09157	1	0	1	0
FRAME 121	scene09169	2	0	1	0
FRAME 122	scene10033	1	0	1	0
FRAME 123	scene10045	1	0	3	0
FRAME 124	scene10057	1	0	1	0
FRAME 125	scene10069	1	0	1	0
FRAME 126	scene10081	1	0	3	0
FRAME 127	scene10093	1	0	2	0
FRAME 128	scene10105	1	0	2	0
FRAME 129	scene10117	1	0	1	0
FRAME 130	scene10129	1	0	1	0

LOCATION: SITE 4 (NICHOLSON)

FOLDER NUMBER: 820-5pm

DATE AND TIME: Tuesday, November 21, 2017, 4:41:30pm

WEATHER: No Rain

TOTAL HOURS: 1

TOTAL NUMBER OF FRAMES: 221

		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 131	scene10141	1	0	2	0
FRAME 132	scene10153	1	0	0	0
FRAME 133	scene10321	1	0	3	0
FRAME 134	scene10333	1	0	2	0
FRAME 135	scene10345	2	0	2	0
FRAME 136	scene10357	2	0	2	0
FRAME 137	scene10369	2	0	2	0
FRAME 138	scene10381	2	0	2	0
FRAME 139	scene10393	2	0	1	0
FRAME 140	scene10405	2	0	1	0
FRAME 141	scene10417	2	0	2	0
FRAME 142	scene10429	2	0	3	0
FRAME 143	scene10441	2	0	2	0
FRAME 144	scene10573	1	0	0	0
FRAME 145	scene12973	1	0	2	0
FRAME 146	scene12985	1	0	1	0
FRAME 147	scene12997	1	0	1	0
FRAME 148	scene13009	1	0	1	0
FRAME 149	scene13021	1	0	1	0
FRAME 150	scene13033	1	0	1	0
FRAME 151	scene13045	1	0	1	0
FRAME 152	scene13057	1	0	2	0
FRAME 153	scene13069	1	0	2	0
FRAME 154	scene13081	1	0	2	0
FRAME 155	scene13093	1	0	2	0
FRAME 156	scene13561	1	0	1	0
FRAME 157	scene13573	1	0	2	0
FRAME 158	scene13585	1	0	2	0
FRAME 159	scene13597	1	0	1	0
FRAME 160	scene19573	1	0	2	0
FRAME 161	scene19597	1	0	1	0
FRAME 162	scene19609	1	0	1	0
FRAME 163	scene19621	1	0	2	0

LOCATION: SITE 4 (NICHOLSON)

FOLDER NUMBER: 820-5pm

DATE AND TIME: Tuesday, November 21, 2017, 4:41:30pm

WEATHER: No Rain

TOTAL HOURS: 1

TOTAL NUMBER OF FRAMES: 221

		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 164	scene19633	1	0	2	0
FRAME 165	scene19645	1	0	1	0
FRAME 166	scene20029	1	0	1	0
FRAME 167	scene20041	1	0	1	0
FRAME 168	scene20053	1	0	1	0
FRAME 169	scene20065	1	0	1	0
FRAME 170	scene20077	1	0	1	0
FRAME 171	scene20089	1	0	1	0
FRAME 172	scene20101	1	0	1	0
FRAME 173	scene20113	1	0	1	0
FRAME 174	scene20173	2	0	1	0
FRAME 175	scene20185	2	0	0	0
FRAME 176	scene20197	2	0	1	0
FRAME 177	scene20221	3	0	0	0
FRAME 178	scene20341	3	0	2	0
FRAME 179	scene20353	2	0	0	0
FRAME 180	scene20365	1	0	0	0
FRAME 181	scene21481	1	0	2	0
FRAME 182	scene21493	1	0	0	0
FRAME 183	scene21505	1	0	1	0
FRAME 184	scene21517	1	0	1	0
FRAME 185	scene21649	1	0	2	0
FRAME 186	scene21661	1	0	1	0
FRAME 187	scene21673	1	0	1	0
FRAME 188	scene21685	1	0	1	0
FRAME 189	scene21697	1	0	1	0
FRAME 190	scene21709	1	0	1	0
FRAME 191	scene21721	1	0	2	0
FRAME 192	scene22057	2	0	1	0
FRAME 193	scene22069	2	0	1	0
FRAME 194	scene22081	2	0	1	0
FRAME 195	scene22093	2	0	1	0
FRAME 196	scene22105	2	0	2	0

LOCATION: SITE 4 (NICHOLSON)					
FOLDER NUMBER: 820-5pm					
DATE AND TIME: Tuesday, November 21, 2017, 4:41:30pm					
WEATHER: No Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 221					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of pedestrians	# of cyclists	# of pedestrians	# of cyclists
FRAME 197	scene22117	1	0	1	0
FRAME 198	scene22129	1	0	1	0
FRAME 199	scene23725	2	0	3	0
FRAME 200	scene23737	2	0	3	0
FRAME 201	scene23749	2	0	3	0
FRAME 202	scene23761	2	0	3	0
FRAME 203	scene23773	2	0	1	0
FRAME 204	scene23785	2	0	2	0
FRAME 205	scene23797	2	0	1	0
FRAME 206	scene23809	1	0	1	0
FRAME 207	scene24841	2	0	1	0
FRAME 208	scene24853	2	0	1	0
FRAME 209	scene24865	2	0	1	0
FRAME 210	scene24877	2	0	2	0
FRAME 211	scene24889	2	0	1	0
FRAME 212	scene24901	2	0	1	0
FRAME 213	scene24973	2	0	2	0
FRAME 214	scene24985	2	0	2	0
FRAME 215	scene24997	2	0	0	0
FRAME 216	scene25009	2	0	1	0
FRAME 217	scene25021	2	0	1	0
FRAME 218	scene25585	1	0	1	0
FRAME 219	scene25597	1	0	2	0
FRAME 220	scene25609	1	0	1	0
FRAME 221	scene25621	1	0	1	0

LOCATION: SITE 5 (UNION)			
FOLDER NUMBER: 236 (1)			
DATE AND TIME: October 27, 2017, 7:31:44 PM			
WEATHER: Rain			
TOTAL HOURS: 1			
TOTAL NUMBER OF FRAMES: 278			

		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of Pedestrians	# of Cyclists	# of Pedestrians	# of Cyclists
FRAME 1	scene00001	1	0	1	0
FRAME 2	scene00013	1	0	1	0
FRAME 3	scene00025	1	0	1	0
FRAME 4	scene00037	1	0	1	0
FRAME 5	scene00049	1	0	1	0
FRAME 6	scene00061	1	0	1	0
FRAME 7	scene00073	1	0	1	0
FRAME 8	scene00085	1	0	1	0
FRAME 9	scene00241	2	0	2	0
FRAME 10	scene00253	2	0	2	0
FRAME 11	scene00265	2	0	2	0
FRAME 12	scene00277	2	0	1	0
FRAME 13	scene00301	2	0	1	0
FRAME 14	scene00337	2	0	1	0
FRAME 15	scene01525	3	0	0	0
FRAME 16	scene01537	3	0	1	0
FRAME 17	scene01609	3	0	1	0
FRAME 18	scene01621	3	0	1	0
FRAME 19	scene01633	3	0	0	0
FRAME 20	scene01933	1	0	1	0
FRAME 21	scene01945	1	0	1	0
FRAME 22	scene01957	1	0	1	0
FRAME 23	scene01969	1	0	1	0
FRAME 24	scene02125	2	0	2	0
FRAME 25	scene02137	2	0	1	0
FRAME 26	scene02149	2	0	1	0
FRAME 27	scene02173	3	0	1	0
FRAME 28	scene02185	3	0	2	0
FRAME 29	scene02197	3	0	2	0
FRAME 30	scene02245	3	0	0	0
FRAME 31	scene02257	3	0	1	0
FRAME 32	scene02269	1	0	2	0
FRAME 33	scene02569	1	0	1	0
FRAME 34	scene02581	1	0	1	0

LOCATION: SITE 5 (UNION)

FOLDER NUMBER: 236 (1)

DATE AND TIME: October 27, 2017, 7:31:44 PM

WEATHER: Rain

TOTAL HOURS: 1

TOTAL NUMBER OF FRAMES: 278

		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of Pedestrians	# of Cyclists	# of Pedestrians	# of Cyclists
FRAME 35	scene02593	1	0	1	0
FRAME 36	scene02605	1	0	1	0
FRAME 37	scene02617	1	0	1	0
FRAME 38	scene08653	1	0	1	0
FRAME 39	scene08665	1	0	1	0
FRAME 40	scene08677	1	0	1	0
FRAME 41	scene08713	2	0	2	0
FRAME 42	scene08725	2	0	1	0
FRAME 43	scene09025	3	0	2	0
FRAME 44	scene09037	3	0	2	0
FRAME 45	scene09049	3	0	2	0
FRAME 46	scene09073	3	0	1	0
FRAME 47	scene09085	3	0	2	0
FRAME 48	scene09097	2	0	1	0
FRAME 49	scene09109	2	0	1	0
FRAME 50	scene10357	1	0	1	0
FRAME 51	scene10369	1	0	1	0
FRAME 52	scene10381	1	0	1	0
FRAME 53	scene10393	1	0	1	0
FRAME 54	scene10405	1	0	1	0
FRAME 55	scene10513	1	0	1	0
FRAME 56	scene13141	1	0	0	0
FRAME 57	scene13153	1	0	1	0
FRAME 58	scene13165	1	0	1	0
FRAME 59	scene13177	1	0	1	0
FRAME 60	scene13981	1	0	1	0
FRAME 61	scene13993	1	0	1	0
FRAME 62	scene14005	1	0	1	0
FRAME 63	scene15553	1	0	1	0
FRAME 64	scene15565	1	0	1	0
FRAME 65	scene15577	1	0	1	0
FRAME 66	scene15589	1	0	1	0
FRAME 67	scene17185	1	0	1	0
FRAME 68	scene17197	1	0	1	0

LOCATION: SITE 5 (UNION)					
FOLDER NUMBER: 236 (1)					
DATE AND TIME: October 27, 2017, 7:31:44 PM					
WEATHER: Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 278					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of Pedestrians	# of Cyclists	# of Pedestrians	# of Cyclists
FRAME 69	scene17233	1	0	1	0
FRAME 70	scene17245	1	0	0	0
FRAME 71	scene18037	2	0	2	0
FRAME 72	scene18049	2	0	2	0
FRAME 73	scene18061	2	0	2	0
FRAME 74	scene19621	1	0	1	0
FRAME 75	scene19633	1	0	1	0
FRAME 76	scene19645	1	0	1	0
FRAME 77	scene19933	1	0	1	0
FRAME 78	scene19645	1	0	1	0
FRAME 79	scene19957	1	0	1	0
FRAME 80	scene19993	3	0	3	0
FRAME 81	scene20017	3	0	3	0
FRAME 82	scene20029	3	0	3	0
FRAME 83	scene20173	5	0	3	0
FRAME 84	scene20185	5	0	4	0
FRAME 85	scene20977	3	0	1	0
FRAME 86	scene20989	3	0	1	0
FRAME 87	scene21001	3	0	2	0
FRAME 88	scene21025	3	0	2	0
FRAME 89	scene21205	3	0	2	0
FRAME 90	scene21217	3	0	3	0
FRAME 91	scene21229	3	0	1	0
FRAME 92	scene21253	2	0	2	0
FRAME 93	scene21265	2	0	1	0
FRAME 94	scene22093	1	0	1	0
FRAME 95	scene22105	1	0	1	0
FRAME 96	scene22117	1	0	1	0
FRAME 97	scene22909	1	0	1	0
FRAME 98	scene22921	2	0	1	0
FRAME 99	scene22933	2	0	2	0
FRAME 100	scene23185	2	0	2	0
FRAME 101	scene23197	2	0	1	0
FRAME 102	scene23209	2	0	1	0

LOCATION: SITE 5 (UNION)			
FOLDER NUMBER: 236 (1)			
DATE AND TIME: October 27, 2017, 7:31:44 PM			
WEATHER: Rain			
TOTAL HOURS: 1			
TOTAL NUMBER OF FRAMES: 278			

		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of Pedestrians	# of Cyclists	# of Pedestrians	# of Cyclists
FRAME 103	scene23641	1	0	1	0
FRAME 104	scene23653	1	0	1	0
FRAME 105	scene23665	1	0	1	0
FRAME 106	scene26689	2	0	0	0
FRAME 107	scene26701	2	0	1	0
FRAME 108	scene26713	2	0	1	0
FRAME 109	scene27013	3	0	1	0
FRAME 110	scene27025	2	0	1	0
FRAME 111	scene27037	2	0	1	0
FRAME 112	scene27049	2	0	1	0
FRAME 113	scene27085	2	0	1	0
FRAME 114	scene27097	2	0	1	0
FRAME 115	scene27109	2	0	1	0
FRAME 116	scene27121	2	0	1	0
FRAME 117	scene27229	2	0	1	0
FRAME 118	scene27445	1	0	1	0
FRAME 119	scene27457	1	0	1	0
FRAME 120	scene27553	1	0	1	0
FRAME 121	scene27949	1	0	1	0
FRAME 122	scene27961	1	0	1	0
FRAME 123	scene27973	1	0	1	0
FRAME 124	scene28993	1	0	1	0
FRAME 125	scene29005	1	0	1	0
FRAME 126	scene29017	1	0	1	0
FRAME 127	scene29029	1	0	1	0
FRAME 128	scene29041	1	0	1	0
FRAME 129	scene29065	1	0	2	0
FRAME 130	scene29137	2	0	2	0
FRAME 131	scene29281	3	0	2	0
FRAME 132	scene29293	3	0	2	0
FRAME 133	scene29305	3	0	2	0
FRAME 134	scene29329	3	0	2	0
FRAME 135	scene29341	3	0	2	0
FRAME 136	scene29617	2	1	1	0

LOCATION: SITE 5 (UNION)					
FOLDER NUMBER: 236 (1)					
DATE AND TIME: October 27, 2017, 7:31:44 PM					
WEATHER: Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 278					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of Pedestrians	# of Cyclists	# of Pedestrians	# of Cyclists
FRAME 137	scene29629	2	1	0	0
FRAME 138	scene29641	3	1	2	0
FRAME 139	scene30421	1	0	1	0
FRAME 140	scene30433	1	0	1	0
FRAME 141	scene30445	1	0	1	0
FRAME 142	scene30457	1	0	2	0
FRAME 143	scene30469	1	0	0	0
FRAME 144	scene31285	1	0	0	0
FRAME 145	scene31297	1	0	1	0
FRAME 146	scene31309	1	0	1	0
FRAME 147	scene31321	1	0	1	0
FRAME 148	scene31369	2	0	2	0
FRAME 149	scene31381	2	0	2	0
FRAME 150	scene31393	2	0	1	0
FRAME 151	scene31825	5	0	3	0
FRAME 152	scene31837	5	0	4	0
FRAME 153	scene31849	5	0	4	0
FRAME 154	scene31885	5	0	1	0
FRAME 155	scene31897	4	0	2	0
FRAME 156	scene32305	2	0	1	0
FRAME 157	scene32317	2	0	2	0
FRAME 158	scene32329	2	0	1	0
FRAME 159	scene32653	1	0	1	0
FRAME 160	scene32665	1	0	1	0
FRAME 161	scene32677	1	0	1	0
FRAME 162	scene32689	1	0	1	0
FRAME 163	scene32701	1	0	1	0
FRAME 164	scene32713	1	0	0	0
FRAME 165	scene33697	1	0	1	0
FRAME 166	scene33709	2	0	2	0
FRAME 167	scene33721	2	0	2	0
FRAME 168	scene33733	2	0	2	0
FRAME 169	scene34093	4	0	1	0
FRAME 170	scene34105	4	0	1	0

LOCATION: SITE 5 (UNION)			
FOLDER NUMBER: 236 (1)			
DATE AND TIME: October 27, 2017, 7:31:44 PM			
WEATHER: Rain			
TOTAL HOURS: 1			
TOTAL NUMBER OF FRAMES: 278			

		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of Pedestrians	# of Cyclists	# of Pedestrians	# of Cyclists
FRAME 171	scene34165	4	0	2	0
FRAME 172	scene34177	4	0	3	0
FRAME 173	scene34189	4	0	4	0
FRAME 174	scene34201	4	0	4	0
FRAME 175	scene34225	5	0	5	0
FRAME 176	scene34237	5	0	5	0
FRAME 177	scene35533	1	0	1	0
FRAME 178	scene35545	1	0	0	0
FRAME 179	scene35569	1	0	1	0
FRAME 180	scene35581	1	0	1	0
FRAME 181	scene37825	1	0	1	0
FRAME 182	scene37837	1	0	1	0
FRAME 183	scene37969	1	0	1	0
FRAME 184	scene37981	1	0	1	0
FRAME 185	scene38317	1	0	1	0
FRAME 186	scene38329	1	0	1	0
FRAME 187	scene38341	1	0	1	0
FRAME 188	scene39661	1	0	1	0
FRAME 189	scene39673	1	0	1	0
FRAME 190	scene39685	1	0	1	0
FRAME 191	scene39697	1	0	1	0
FRAME 192	scene42685	0	1	0	0
FRAME 193	scene42697	0	1	0	0
FRAME 194	scene42709	0	1	0	1
FRAME 195	scene42721	1	1	2	1
FRAME 196	scene42733	1	1	2	0
FRAME 197	scene42745	1	1	1	0
FRAME 198	scene43525	1	0	1	0
FRAME 199	scene43537	1	0	1	0
FRAME 200	scene43549	1	0	1	0
FRAME 201	scene45145	1	0	1	0
FRAME 202	scene45157	1	0	1	0
FRAME 203	scene45169	1	0	1	0
FRAME 204	scene45421	3	0	1	0

LOCATION: SITE 5 (UNION)					
FOLDER NUMBER: 236 (1)					
DATE AND TIME: October 27, 2017, 7:31:44 PM					
WEATHER: Rain					
TOTAL HOURS: 1					
TOTAL NUMBER OF FRAMES: 278					
		Manual Counting		Algorithm Detected	
FRAME NUMBER	FRAME CODE	# of Pedestrians	# of Cyclists	# of Pedestrians	# of Cyclists
FRAME 205	scene45433	3	0	3	0
FRAME 206	scene45445	3	0	2	0
FRAME 207	scene45457	5	0	4	0
FRAME 208	scene45469	5	0	4	0
FRAME 209	scene46657	3	0	3	0
FRAME 210	scene46669	3	0	2	0
FRAME 211	scene46705	3	0	3	0
FRAME 212	scene46729	3	0	3	0
FRAME 213	scene46741	3	0	3	0
FRAME 214	scene47149	1	0	1	0
FRAME 215	scene47161	1	0	2	0
FRAME 216	scene47173	1	0	2	0
FRAME 217	scene47329	2	0	2	0
FRAME 218	scene47341	2	0	2	0
FRAME 219	scene49417	1	0	1	0
FRAME 220	scene49429	1	0	1	0
FRAME 221	scene49441	1	0	1	0
FRAME 222	scene51385	1	0	1	0
FRAME 223	scene51397	1	0	1	0
FRAME 224	scene51409	1	0	1	0
FRAME 225	scene51421	1	0	1	0
FRAME 226	scene55189	1	0	1	0
FRAME 227	scene55201	1	0	1	0
FRAME 228	scene55213	1	0	1	0
FRAME 229	scene55225	1	0	1	0
FRAME 230	scene55237	1	0	1	0
FRAME 231	scene56629	1	0	2	0
FRAME 232	scene56641	1	0	1	0
FRAME 233	scene56653	1	0	1	0
FRAME 234	scene57745	1	0	1	0
FRAME 235	scene57757	1	0	1	0
FRAME 236	scene57769	1	0	0	0
FRAME 237	scene58597	1	0	1	0
FRAME 238	scene58609	1	0	1	0

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FRAME NUMBER	FRAME CODE	# of Pedestrians	# of Cyclists	# of Pedestrians	# of Cyclists
FRAME 239	scene58621	1	0	1	0
FRAME 240	scene28993	1	0	1	0
FRAME 241	scene59005	1	0	1	0
FRAME 242	scene59017	1	0	1	0
FRAME 243	scene59041	1	0	2	0
FRAME 244	scene59053	1	0	1	0
FRAME 245	scene59065	1	0	1	0
FRAME 246	scene59149	4	0	3	0
FRAME 247	scene59161	6	0	3	0
FRAME 248	scene59173	6	0	4	0
FRAME 249	scene59185	6	0	4	0
FRAME 250	scene59197	6	0	3	0
FRAME 251	scene63985	2	0	1	0
FRAME 252	scene63997	2	0	2	0
FRAME 253	scene64009	2	0	1	0
FRAME 254	scene64021	2	0	2	0
FRAME 255	scene64033	2	0	2	0
FRAME 256	scene68677	1	0	1	0
FRAME 257	scene68689	1	0	1	0
FRAME 258	scene68701	1	0	1	0
FRAME 259	scene68713	1	0	1	0
FRAME 260	scene70945	1	0	1	0
FRAME 261	scene70957	1	0	1	0
FRAME 262	scene70969	1	0	1	0
FRAME 263	scene70981	2	0	2	0
FRAME 264	scene70993	2	0	1	0
FRAME 265	scene71005	2	0	1	0
FRAME 266	scene71689	1	0	0	0
FRAME 267	scene71701	1	0	1	0
FRAME 268	scene71713	1	0	1	0
FRAME 269	scene71725	1	0	1	0
FRAME 270	scene75541	1	0	1	0
FRAME 271	scene75553	1	0 Rain	1	0
FRAME 272	scene75565	1	0 Rain	1	0

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FRAME NUMBER	FRAME CODE	# of Pedestrians	# of Cyclists	# of Pedestrians	# of Cyclists
FRAME 273	scene78013	1	0 Rain	1	0
FRAME 274	scene78025	1	0 Rain	0	0
FRAME 275	scene78037	1	0 Rain	0	0
FRAME 276	scene80221	1	0 Rain	0	0
FRAME 277	scene80233	1	0 Rain	0	0
FRAME 278	scene80245	1	0 Rain	0	0

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