4.1 Initial Program Installation

1. The system must be running Ubuntu 14.0.4 for the parking monitoring system to work
2. Using the Installation instruction in the link below in Step 3, the CUDA drivers and Caffe libraries with dependencies will be installed.
3. Installation Link: https://github.com/NVIDIA/DIGITS/blob/master/docs/UbuntuInstall.md
4. Follow the steps in the link for installation. Do not go pass the “Getting Started” Section in the link.
5. Download all the files as a zip in the link provided:

https://github.com/awagne30/TechOps

1. Then extract the zip file to the user’s preferred location.
2. Locate the file “PLSM.sh” and execute the script to run the program.

4.2 Setting up Parking Lot Spaces

1. Adding spots
2. Navigate to the main screen of the program
3. Click on the button labeled as “Open operator”
4. To add a spot, navigate to the desired parking space.
5. Then click and hold the left mouse button, and highlight the area of the parking space inside each parking box. (Important: When highlighting the area, make sure the highlighted regions are inside the box or inside the outline of the parking space)
6. Release the left mouse button to finish highlighting the spot. A rectangular box and a number label will appear on the image indicating the parking spot that will be monitored.
7. To add more spots, repeat steps c through e until all spots are added’
8. Delete Spot
   1. To delete a spot, click on a label number inside a list box that is located on the right-hand side of the window.
   2. Once the label number is selected, click on the “delete selected” button to delete the highlighted spot.
9. Saving Parking Lot
   1. After all spots are added and finalized, click on “Save Parking Lot” button which is located at the top of the window to save the image.
   2. Once a dialog box appears, name the parking lot to save the content.
10. Open Existing parking lot
    1. Click on “open parking lot” button to open existing parking lots.
    2. Navigate to the desired parking lot file and open the file.
    3. The parking lot image and existing parking spaces will be highlighted on the image.

4.3 Monitoring Parking Lot

1. To monitor the parking lot, a parking lot must be selected by using the “open parking lot button”
2. A red box will appear on the image to indicate occupied spaces.
3. A green box will appear on the image to indicate available spaces
4. At the bottom of the window, the number of available spaces and occupied spaces are labeled for that time interval.

4.4 Terminating the program

1. Save all necessary information before proceeding to step 2.
2. There are two ways to terminate the operation.
   1. Click on the “X” button on the top-right hand side of the window to terminate the program
   2. Locate the “Quit” button on the top of the window, and click on the button to also terminate the program.

4.5 Unscheduled Termination of program

1. In an event of an unscheduled termination of the program there is a risk of losing unsaved data. This primarily refers to unsaved parking lot layouts, but could also damage temporary files. These will be restored when the program is reopened.

4.6 Restarting the program

1. Navigate to the directory of the program.
2. Locate the file “PLSM.sh” and execute the script to run the program.