

Counting Cyclists and Pedestrians in the City of Peterborough

Completed in Fall 2016 for MATH 4851 by Joshua Knackstedt, with the help of (1)Dr. Wesley Burr, (2)Lindsay Stroud and (3)Matthew Hayes

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Background

GreenUP is a not-for-profit organization that works to create a greener environment in Peterborough. The organization coordinates an annual data collection exercise that involves volunteer university students tracking and collecting information at several intersections in Peterborough.

The goal is to count how many cyclists and pedestrians pass through a given intersection in a two hour block, in order to provide a general picture of the level of cycling and walking activity in the city.

Methodology

- Compile all of the data collection sheets that were used to count cyclists and pedestrians

- Enter the data from the sheets into a single spreadsheet so that each location's cyclist and pedestrian counts can be compared

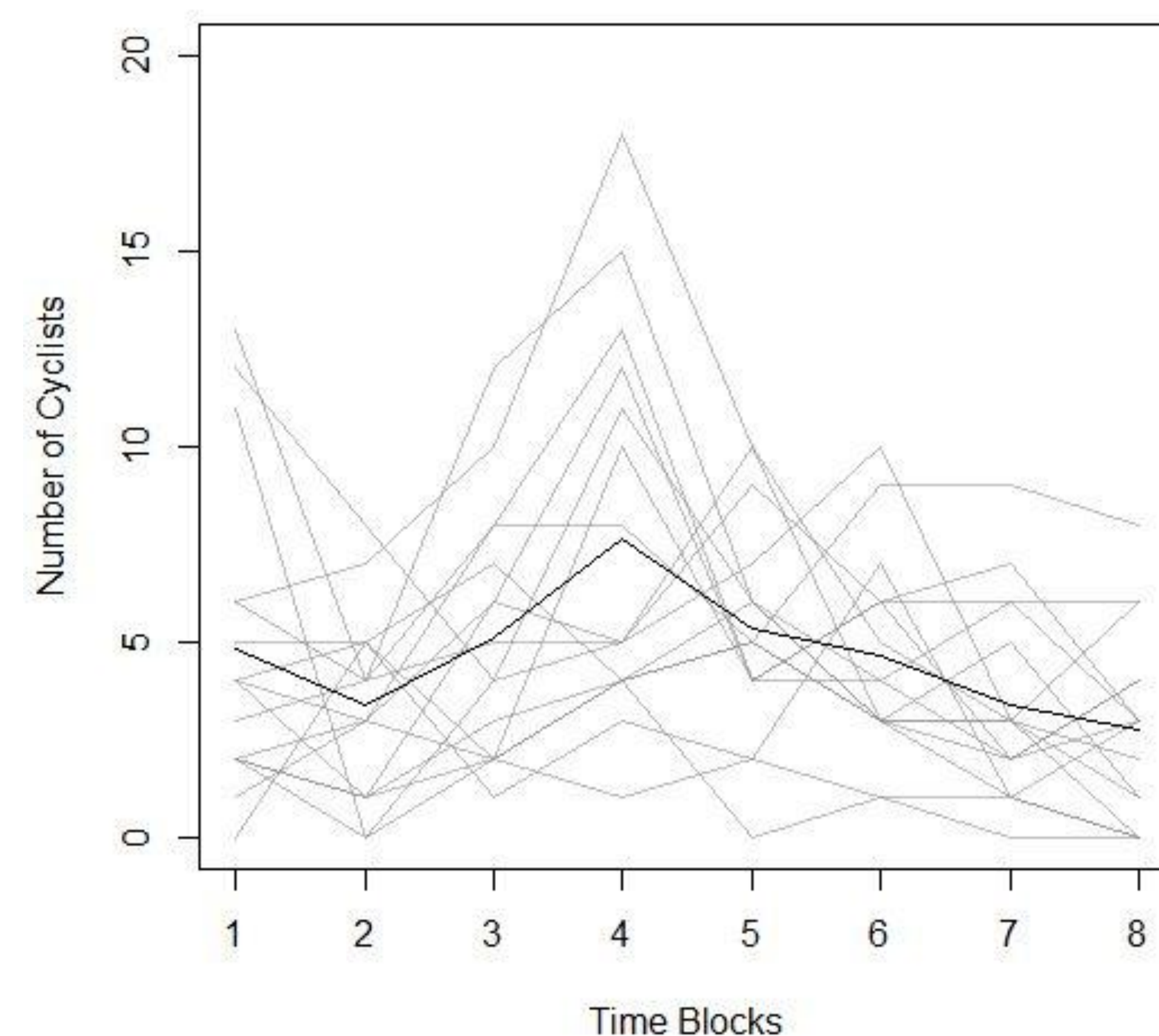
- Use these tabulations to give estimated amounts for the daily, weekly, monthly, and annual cyclist counts

- Analyze the data in the spreadsheet to find any numbers that differed from the rest of the data and make conclusions based on them

- Compare the cyclist and pedestrian counts taken this year to those that were done in previous years, in order to highlight differences in the numbers that were collected over the years

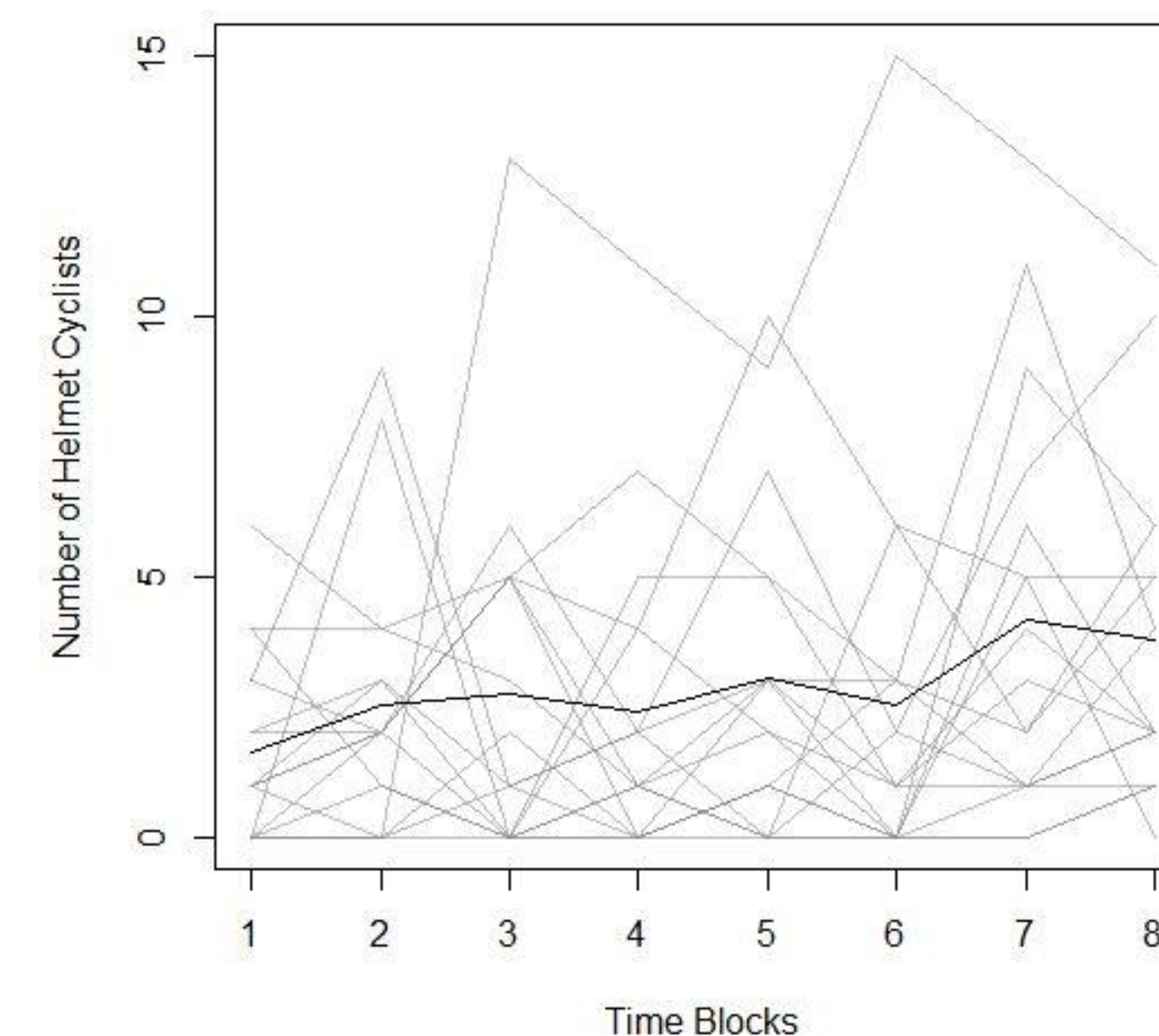
Graphical Data

Total Cyclists for the Morning of September 29th

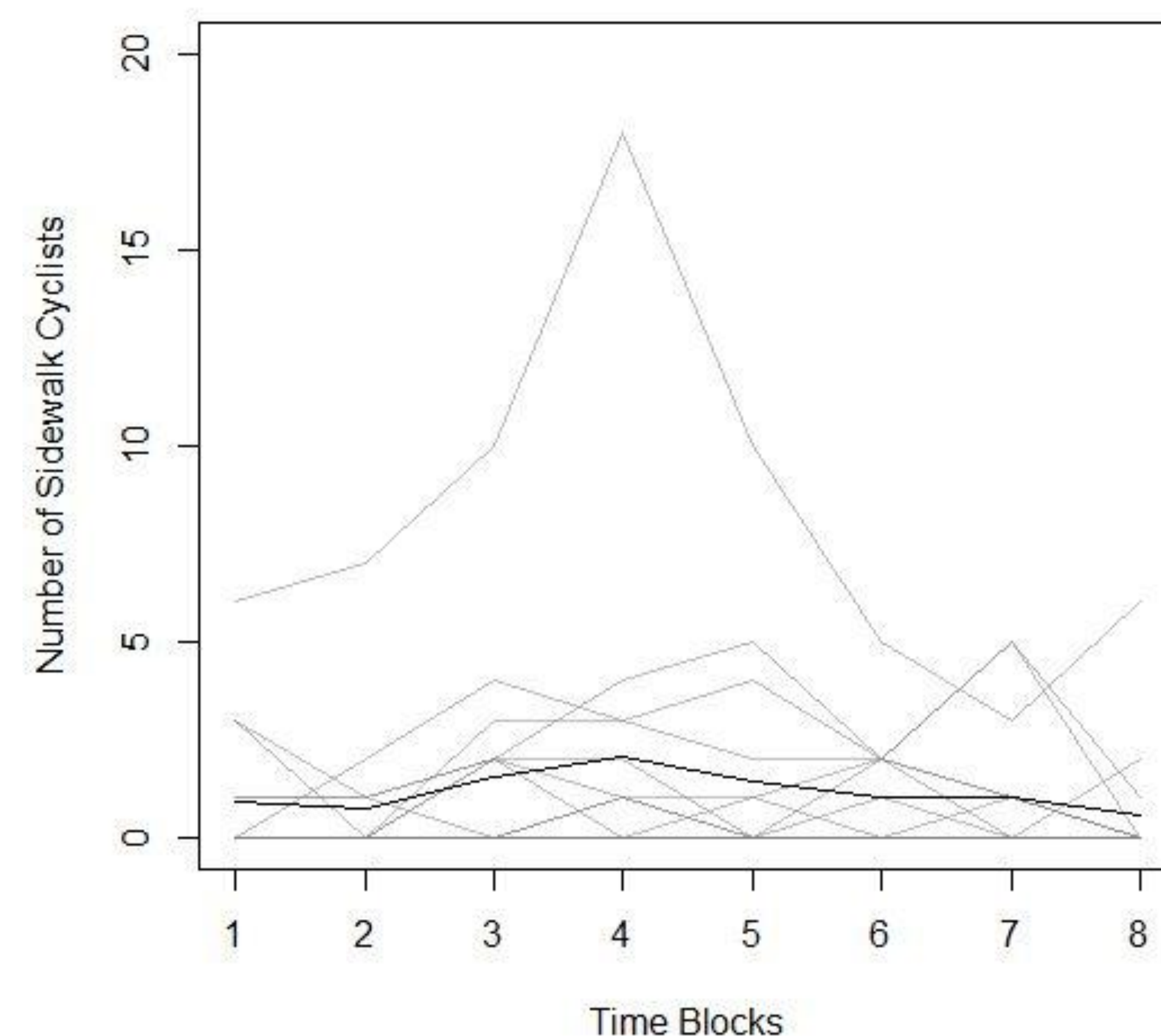


Graphical Data

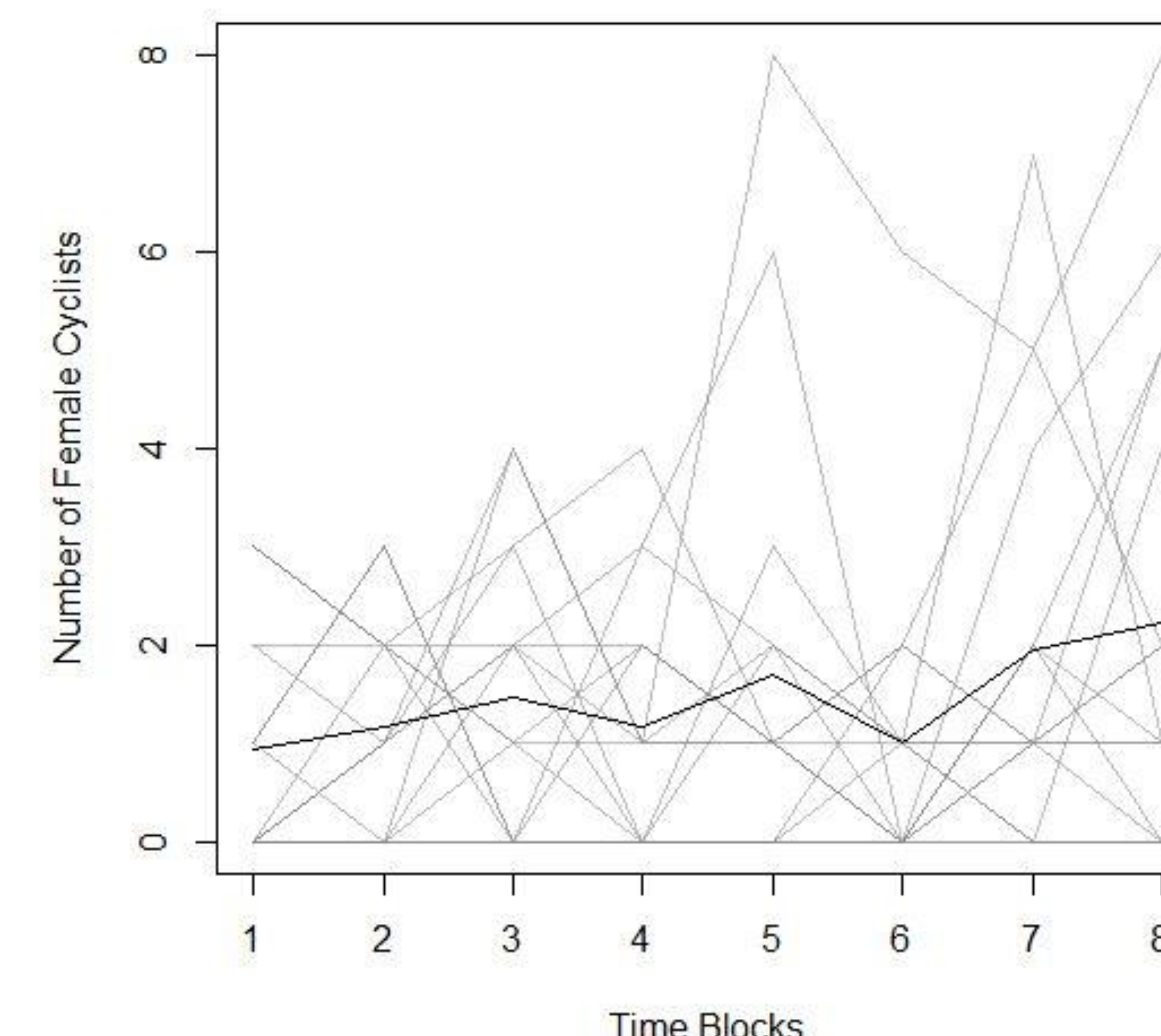
Helmet Cyclists for the Afternoon of September 28th



Sidewalk Cyclists for the Morning of September 29th



Female Cyclists for the Afternoon of September 28th



In all of the above graphs, each of the grey lines represents the number of bikers that were counted at a single intersection over time. The black line in each graph represents the average number of bikers that were counted at any given intersection.

Time Block Legend:

For the morning graphs

1- Cyclists counted between 7:30 and 7:45am
2- Cyclists counted between 7:45 and 8:00am
And so on..

For the afternoon graphs

1- Cyclists counted between 3:00 and 3:15pm
2- Cyclists counted between 3:15 and 3:30pm
And so on..

Notable Results

- Six locations had a much higher cyclist count from 8:15-8:30am than from 8:00-8:15am. Some of these were near elementary and secondary schools and one was near the Trent University campus, indicating a higher level of student cyclists

- One location on the Sept. 29 morning count had a significantly higher sidewalk cyclist count than the others. However, the location in question does not actually have sidewalks. This appears to be a data collection error

- Locations close to the Rotary Greenway Trail consistently showed a higher cyclist count, especially around the Rowing Club

- There is a bike lane on Parkhill Rd. near the Rotary Trail, yet no cyclist used it, indicating a problem of communication or interest in the lane

- The data collection showed several consistent errors in the counts for wheelchairs, scooters, and pedestrians, highlighting the need for improvement in the information provided to collectors

Special Thanks To:



Trent Community
Research Centre

