

Advanced GIS Applications in Urban Planning (URBP 608)

Fall 2011

Assignment 3: Spatial Analysis

Velo Quebec has asked you to write a report on the state of bicycle safety in Montreal. Velo Quebec has provided you with a dataset containing the location of every reported bicycle accident on the island of Montreal between 2003 and 2006 to help you in generating the report. They have also included an excel file that have descriptions of each and every variable in the dataset provided. This report will be submitted to the City of Montreal to help them in reducing bicycle accidents. You need to bear in mind that you are representing an advocacy group and any recommendations or claims need to be supported by maps and data. This report will be submitted mainly to engineers and higher administration in the city so it has to be brief.

Your task to draft a 2 pages (max) report (with as many pages of maps and figures as you would like) addressing spatial and temporal trends in cycling accidents during this time period. You will need to use spatial statistics techniques learned in the class in preparing this brief.

The following is a list of questions that can guide you in developing your report

- Can you observe any correlations between the built environment accident frequencies?
- Does the spatial clustering of accidents vary by year, month, day of week, time of day, season etc?
- Are there any hot spot areas on the island of Montreal that requires more attention from the City? Explore different ways when doing so including generating a surface in geostatistical analyst.

More importantly, please think about what other relationships you may want to explore and develop a methodology to test it. Prepare maps to make your point and to highlight your hypothesis.