Crime Mapping, Education and PNCIS

By

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Where is California, PA?
Service Learning Quote

“If you are going to be in academia, do not live your whole life in the ivory tower” – Dr. Jay Morgan
Town and Gown Tension

- University does NOT pay local taxes – Crime, Roads, etc
- Area takes advantage of students – Rent
Students want real – world applications

- Diploma is not a ticket to a job
- There are issues in real – world data: Misspellings, changes to types of streets
- Students need to learn how “to adapt and improvise.” – Clint Eastwood: Heartbreak Ridge
Student Projects
Introduction

- Our group was assigned June 2009
- As a group, we are going to compare the assaults, thefts, and DUI’s in the month of June related to the South Side
- We chose the South Side because it is a popular bar area
- We chose not to focus on special events and their relationship to assaults, thefts, and DUI’s due to the likeliness of other groups completing the same task
Maps - Thefts

Thefts in Southside

Legend

Bars_Southside

Thefts_SouthSide

<VALUE>

0 - 0.000002696
0.000002696 - 0.000005983
0.000005983 - 0.000006593
0.000006593 - 0.000010766
0.0000010766 - 0.000003482

4/25/11
Source: D2L
Pittsburgh, PA

Grant Eaton, Ryan Dolan,
Vicki Dulnikowski, Nichole Machnik
In the map of the thefts around the South Side bars, showed that some of the hot spots are located right near the bars.

One hot spot is located in between two of the bars.

The other hot spot is located by another bar.

A possible reason for the hotspots is because people are committing these crimes while intoxicated.

In the South Side area 75% of thefts occurred between 5:00PM and 4:00AM.

This statistic shows that bars influence thefts in the South Side.
Night Games In Pittsburgh

Day games are any games before 5:00 p.m.
Night games are any games after 5:00 p.m.
Night Games In Pittsburgh
Night Games In Pittsburgh

Pittsburgh, PA

Data Provided by: University of Pittsburgh

Hot Spot
Oct_04_5000
<VALUE>

0 - 0.000000005
0.000000005 - 0.000000024
0.000000024 - 0.000000043
0.000000043 - 0.000000062
0.000000062 - 0.00000008
0.00000008 - 0.000000099
0.000000099 - 0.000000118
0.000000118 - 0.000000137
0.000000137 - 0.000000156
0.000000156 - 0.000000174
0.000000174 - 0.000000193
0.000000193 - 0.000000212
0.000000212 - 0.000000271
Night Games In Pittsburgh Composite
Trends for Night Games In Pittsburgh

- Based on composite data, crimes appear to be concentrated in the downtown area, and in the vicinity of Heinz Field.
- Analysis of crimes in this hot spot include:
  - Harassment
  - Theft from motor vehicle
- Some Crimes also occurred in the Southside. These crimes included:
  - Criminal Mischief
  - Possession of Marijuana (1 incident)
  - Simple Assault (1 incident)
  - Theft from motor vehicle (1 incident)
  - DUI (1 incident)
- A high area of crime also appears in East Liberty. These crimes generally include:
  - Prostitution (1 incident)
  - Highway Robbery (1 Incident)
  - Criminal Mischief
- Because there were only two night games, this area of crime appears to be unrelated to the Pittsburgh Steelers.
Neighborhood Maps
Part 1 and 2 Crimes per Neighborhood during July 2009 in Pittsburgh, Pennsylvania

GIS 303 Crime Mapping and Spatial Analysis
Spring 2011
California University of PA

Map Created by:
Ben Snyder
Tim Swango
Steve Hoke
Sarah Temples

City of Pittsburgh
Hierarchy crimes 1 through 26

Data from Pittsburgh Bureau of Police 2009
Map Created on: April 6, 2011

Legend

- Rivers

Neighborhoods

Number of Incidents

- 1-14
- 15-29
- 30-59
- 60-119
- 120 and Higher
July 4\textsuperscript{th} Analysis
Number of Incidents during Weekends in July of 2009

<table>
<thead>
<tr>
<th>Weekends</th>
<th>Number of Incidents</th>
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<tbody>
<tr>
<td>July 4th and 5th</td>
<td>170</td>
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<tr>
<td>July 11th and 12th</td>
<td>196</td>
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<tr>
<td>July 18th and 19th</td>
<td>161</td>
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<tr>
<td>July 25th and 26th</td>
<td>198</td>
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</tbody>
</table>
Part 1 and 2 Crimes Hotspots during July 4th & 5th, 2009 in Pittsburgh, Pennsylvania

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Legend
- Rivers
- July 4th Weekend
- Number of Incidents
  - 1
  - 2
  - 3