

Shading Out The Gun:

How Baltimore City Greenspace Relates to 2013 Homicides

2015 Undergraduate Geospatial Technology Skills Competition

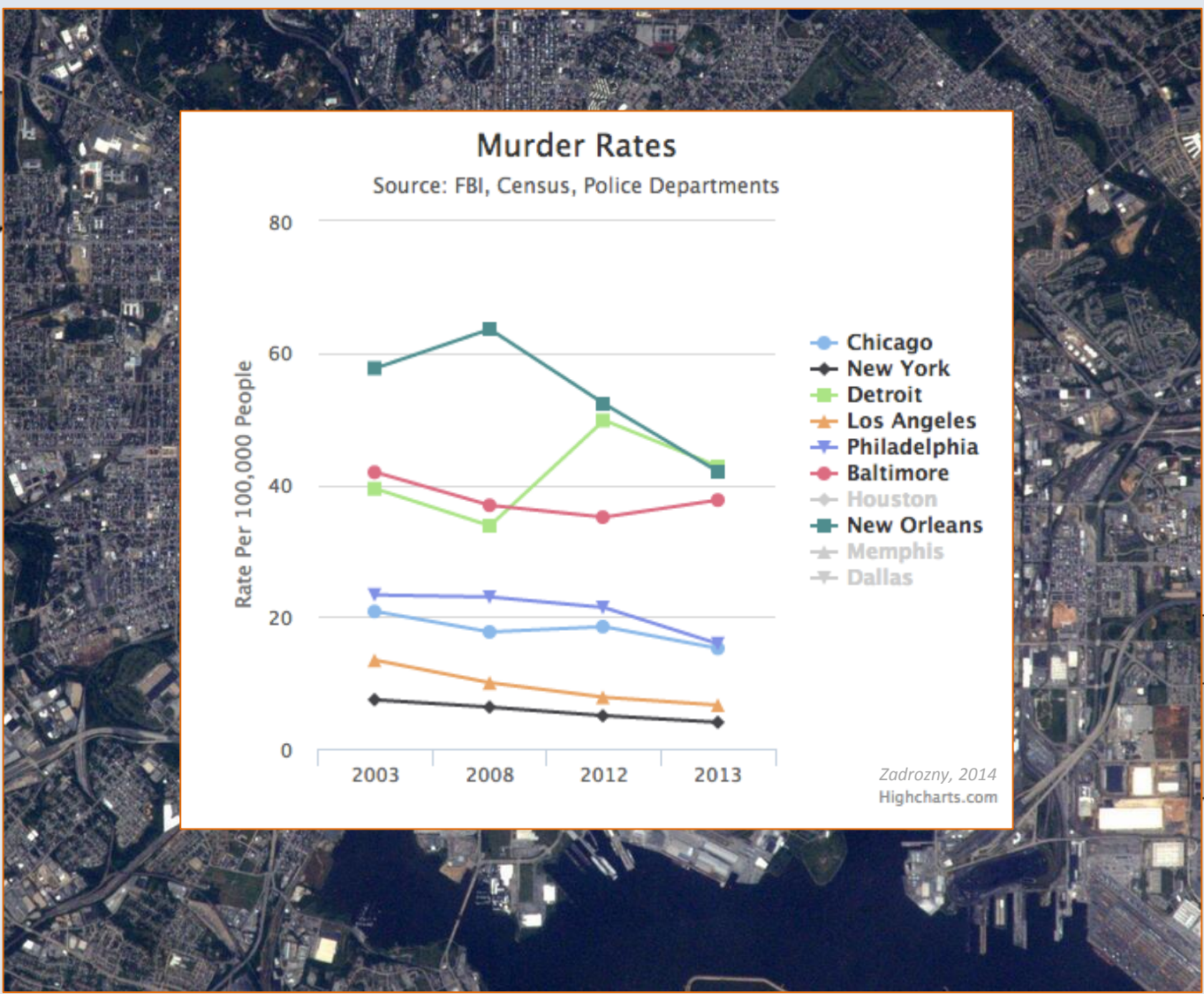
Presented by Molly Finch

*Student in the Geospatial Applications Program
Community College of Baltimore County, Baltimore, Maryland*
Project created for GEOA101 course, Spring 2015



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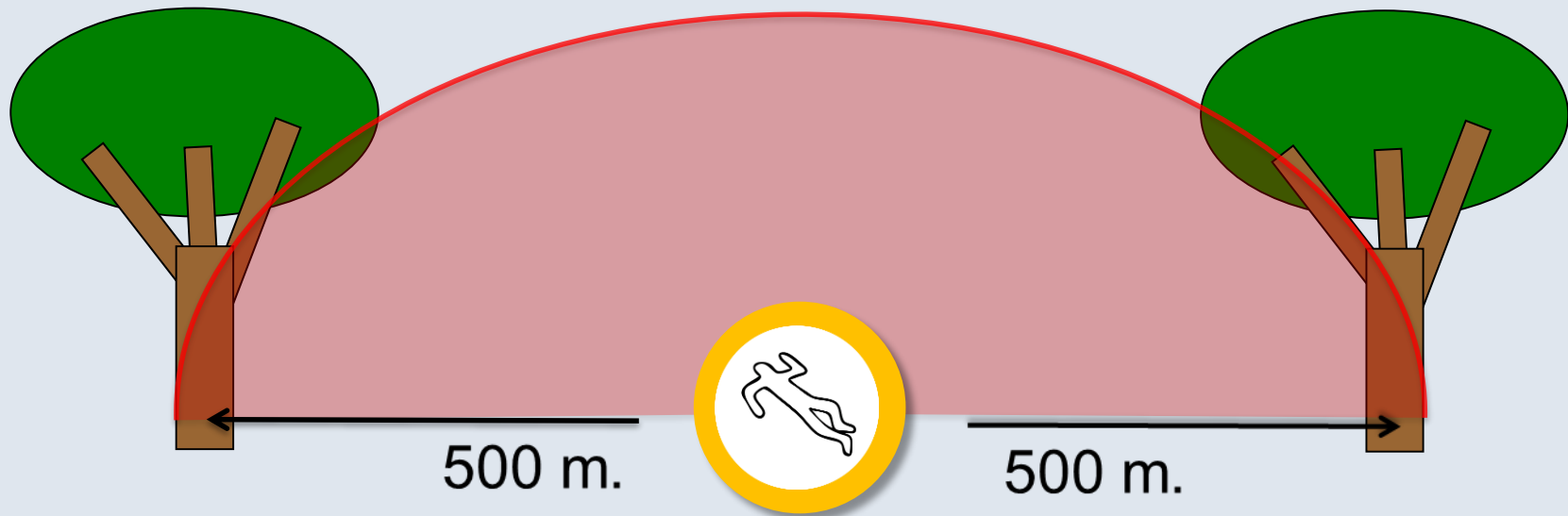
Baltimore City, Maryland



Shading Out The Gun

Null Hypothesis:

There is no correlation between the location of homicides and the quantity (trees vs forest) and quality (mature vs. young/stressed) of urban green spaces.

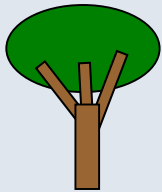


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Literature Review:

Attention Restoration Theory (Kaplan 1995):

Proposes that exposure to nature can reduce mental fatigue created by the many tasks of modern life that require effortful problem solving and reasoning.



Mental Fatigue (Kaplan 1995):

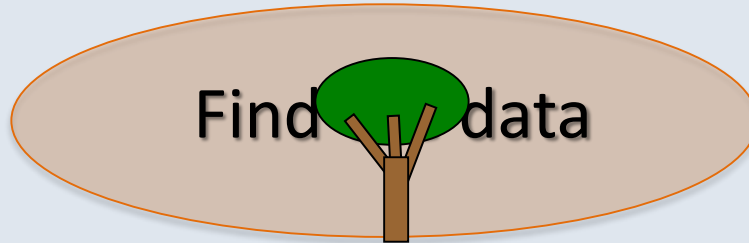
A state characterized by inattentiveness, irritability, and impulsivity due to poor information processing in the brain. This can result in social behavior that is thoughtless and tactless, which can cause small conflicts to spiral out of control.

Barriers to “crime trips” (Peters and Eflers 2010):

Barriers to “crime trips”, for example trees as a psychological barrier, do exist but they are most significant when less than 500 meters from the criminal’s origin location.

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Project Workflow: Methodology



**Locations for all
2013 Homicides**

Vegetation Data

**Baltimore City
Basemap Features**

Open Data Baltimore



BPD Crime Data

Open Data Baltimore



Vegetation



Parks

Open Data Baltimore



City Limits



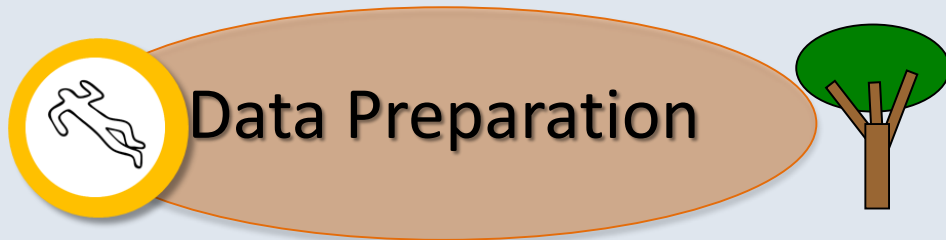
City Streets



Water Features

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Project Workflow: Methodology



**Sorted Crime
Data for 2013**

Selected by Attribute
[Description] = 'Homicide'
Add to current selection
[Weapon]= 'Firearm' OR
'Knife' OR 'Other'

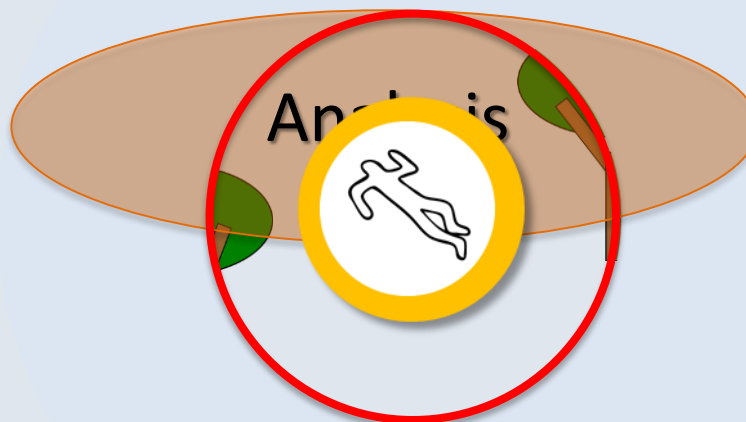
**Geocoded Homicide
Locations**



**Combined
Green Space**

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Project Workflow: Methodology



**500 meter Homicide
Buffer**



**Greenspace within
Homicide Buffer**



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Results

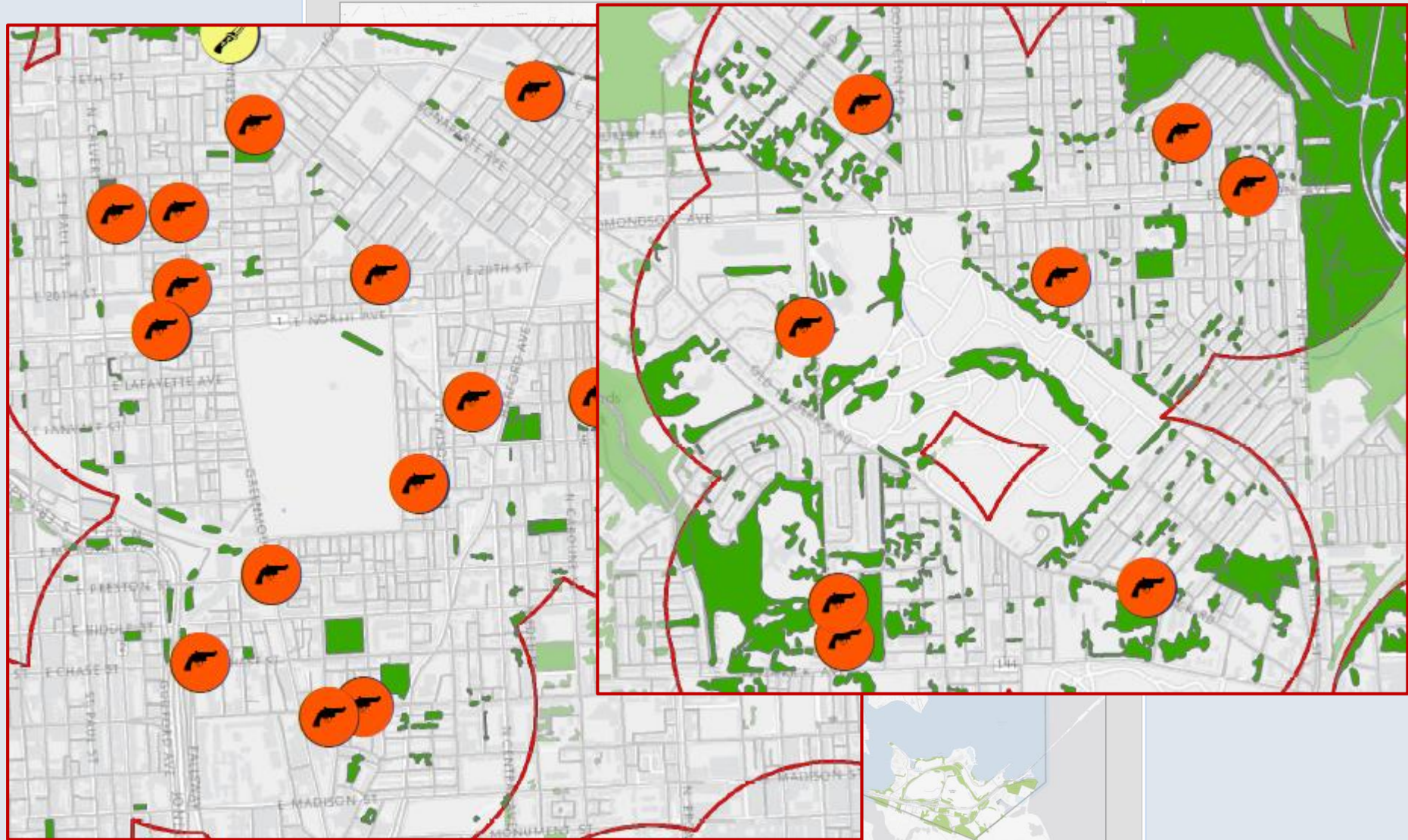
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 -  KNIFE
 -  OTHER
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0 0.2750.55 1.1 1.65 2.2 Miles

SHADING OUT THE GUN

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Questions?



Philipsen, 2012

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