

MIS 0855 Data Science (Section 005) – Fall 2016
Answer Sheet for Assignment #1 – Data Analysis Plan

Part 1: Develop Hypotheses

Hypothesis (1 sentence)	Rationale (2-3 sentences)
Hypothesis 1: A Philadelphia neighborhood with more tree experiences fewer violent crimes per resident than other neighborhoods	A neighborhood with more street trees is safer because trees keep the neighborhood's climate cooler in summer. Most violent crimes usually occur on hot days.
Hypothesis 2: When there are more bike lanes in a Philadelphia neighborhood, its violent crime rate is lower.	A neighborhood with more bike lanes is more accessible by people and safe to walk because of decreased vehicular traffic. It leads to more pedestrian traffic, which makes it difficult for criminals to commit crimes.
Hypothesis 3:	
Hypothesis 4:	
Hypothesis 5:	

Part 2: Identify Data Sets

Data set	Name	URL	Instructions (if URL is not available)
1	Philadelphia Crime Incidents	https://www.opendataphilly.org/dataset/crime-incidents	
2	Philadelphia Street Tree Inventory	https://www.opendataphilly.org/dataset/philadelphia-street-tree-inventory	
3	Philadelphia Bike Network	https://www.opendataphilly.org/dataset/bike-network	
4			
5			

Part 3: Mapping Data to the Hypotheses

Hypothesis	Source
Hypothesis 1: A Philadelphia neighborhood with more tree experiences fewer violent crimes per resident than other neighborhoods	1

	2
Hypothesis 2: When there are more bike lanes in a Philadelphia neighborhood, its violent crime rate is lower.	1
	3
Hypothesis 3:	
Hypothesis 4:	
Hypothesis 5:	