# MIS 0855 Data Science (Section 006) – Fall 2017
## 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: | |
| | |