Research Plan – Traffic Light AI

**Purpose**

The purpose of this research project is to introduce the idea of artificial intelligence to the student who is working on this project. This will be accomplished by training an AI to efficiently manage a basic example of traffic in a typical town. We will not be dealing with cars that turn. However, if the project is completed ahead of schedule, it could be explored. Pedestrians will not be included in this example either, however as mentioned before, it could be explored if the project is completed ahead of schedule.

**Project Breakdown**

We first need to establish a simple environment to allow our AI to learn from. This environment will consist of roads, cars, and AI driven stoplights:

The number of cars will increase and decrease throughout the course of the simulation to represent the normal times of rush hour when people are going to and going home from work, times when there are generally more people on the road.

