CS480/580 Introduction to Artificial Intelligence (Fall, 2019)

## Team Project

Due: Friday, Dec. 6, 2019

Traveling Santa Prime Paths

In CS480/CS580, you are required to work on your final project. A project team can consist of 1-4 students. The project is one of Kaggle’s past challenge “Traveling Santa 2018 - Prime Paths.”

<https://www.kaggle.com/c/traveling-santa-2018-prime-paths/>

You are required to implement a genetic algorithm to solve the traveling Santa 2018 – Prime Paths. You need to design the representation of the candidate solutions, the implementation of genetic operators (crossover/mutation), and the design of the algorithm. Report the solution of your programs.

You are required to write a team project report based on the results of your team project.

Here is an example of the layout of your project report paper.

1. Problem Definition.

Simply describe the “Traveling Santa Problem – Prime Paths” problem.

2. Methods

Provide detailed description on your methods, implementation details (pseudo code, flow chart, etc.),

3. Results

Analyze the results you get, for example, how do methods/strategies lead to a better solution? What do you learn from this project? Use figures, charts, and tables to assist your analysis. You can also compare your results with the Kaggle winners.

4. Conclusions

Provide your conclusions. Do you achieve your goal? Why or why not? If there a way to do it better?

The python evaluation script can be provided soon.

**Delivery form**The delivery form of this assignment should be a 5-page document in MS Words using IEEE double column format.