## Mid Project Update – Dakshin Rathan

- Question 1: Write a paragraph providing detail about the status of the development and experimentation/demonstration.
  - I finished the linear search version of the python implementation of the line sweep algorithm. This means for the sweep line data structure, most operations run in O(n) time. I am able to run timing tests for experimentation on a variety of different numbers of line segments. I am currently working on the linear search version of the java implementation and will then work on the tree search version of the java implementation. I have attached my python code so far.
- Question 2: Provide a detailed description of any changes in the scope of your project. If there are no scope changes, please note 'No changes in scope.'
  - Experimentation changed to not include vertical or horizontal line segments (algorithm doesn't work for those). Also, I will be experimenting on the best case scenario with no intersections and a minimum size of the sweep line data structure.
  - I'm not sure if I will have the python implementation for the tree based implementation working, since I'll have to implement my own segment tree data structure to handle the special cases for the algorithm. If I'm not able to do this, I will compare only the versions I have working (tree/linear) for java and python. Not exactly sure what those will be at this time. In any case, I will be expanding experimentation to test the linear implementations and the tree implementations.