Weekly report

1. **My *Goals* from last week**

- Complete the basic structuring of the proximity heuristic.
- Determine how to tackle the listing of clusters.
- Finishing Heuristic 1 – based on area.
- Planning for Heuristic 2- Based on path clearance.

2. **My *Accomplishments* this week**

- Checked working of Heuristic-1. The planning is complete and terminates correctly.
- The path planning based on Heuristic -2:
  Step 1: Add number of nearest obstacles to each pixel in a matrix.
  Step 2: Add matrix of weights to BSF goal distance matrix. Similar to A* addition of bidirectional weights.
  Step 3: BSF is performed in new weight augmented matrix to find optimal clearest path.

3. **My *Goals* for next week**
   1) Finish the setup of Heuristic 2 and 3. Heuristic 3 being nearest particles gathering.
   2) Design planner that switches between algorithms using a k means.
   3) Prepare experiments to compare heuristics.
   4) Take lots of screenshots and videos of the algorithm at work.
   5)

4. **What I need Dr. Becker to do:**
   1) Analyze the area based heuristic and suggest on experiments to be run on them.
   2) I have two ideas on how to conclude this to have material worth in a Journal paper. Please let me know your thoughts on what to do next:
      a)
      Further ideas on how to use this non overlap setup: We can compare how our planner matches against popular planners for single agent motion planning. To show how the two problems need to be tackled differently and highlight the importance of the study.
      b)
      The next step can be a complete single planner which decides between algorithms based on certain functions and weights.