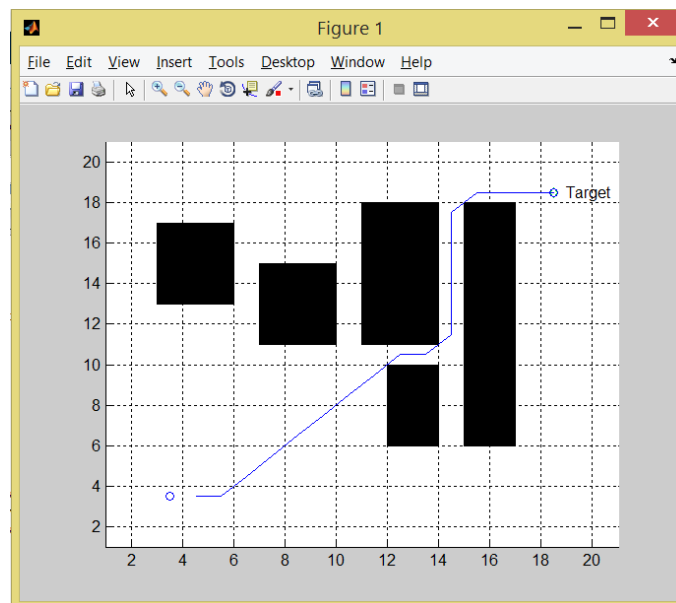


Mandeep Singh

Robotics Assignment 2

A Star

- In A Star we maintain 2 lists valid and in_valid
- Valid List contains
 - All valid nodes as we compute costs for obstacle free cells
- Invalid List contains
 - Obstacle containing cells
 - Cells that are included in path
- Implementation
 - Compute costs of all the adjacent cells to the current cell
 - Add them to valid list
 - Find cell with minimum total cost from valid list, make it parent for next iteration and make it unavailable for next minimum total cost comparison
 - Put that in in_valid list so that we don't visit it again
 - Keep doing this until the cell with minimum cost is not target cell.



- Matlab Code Info:
 - Above is a 20x20 grid, which can be altered.
 - 5 obstacles are added which can be modified too.
- [D star is enhanced version of A Star](#)