# Imitation-learning-project

## General Outline

The project aims to solve/build a single research idea by balancing its theory with empirical evaluation. We hope to begin by gaining intuition about the problem and addressing it on a simple toy task. The method can then be extended to non-trivial robot control tasks in order to compare its efficacy with baseline algorithms.

### Self Driving Cars

- learning by cheating

### Paper List

I guess we can pick 2 papers to read by entering our name in the Name column. Tasks include the following-

- Read papers completely
- Study the code base
- Run code on a smaller problem (potentially MDP)

| Paper | Code Link | Name | Implementation Task |
| --- | --- | --- | --- |

## Distribution of Tasks

As discussed, we can all pick one algorithm to implement and improve on a small task. In case our improvements work, we will apply these on new tasks and finalise results. Upon completion we will package our code base and distribute duties for report and presentation.

| Task | Karush | Reza | Mohammad |
| --- | :---: | :---: | :---: |
| Implement Algo-1 on small task | ✔ | - | - |
| Implement Algo-2 on small task | - | ✔ | - |
| Implement Algo-3 on small task | - | - | ✔ |
| Improve Algo-1 on small task | ✔ | - | - |
| Improve Algo-2 on small task | - | ✔ | - |
| Improve Algo-3 on small task | - | - | ✔ |
| Apply Algo-1 on new tasks | ✔ | - | - |
| Apply Algo-2 on new tasks | - | ✔ | - |
| Apply Algo-3 on new tasks | - | - | ✔ |
| Package code base | ✔ | ✔ | ✔ |
| Write Report | ✔ | ✔ | ✔ |

| Task | Karush | Reza | Mohammad |
|------|:------:|:----:|:--------:|
| Wrap presentation | ✔ | ✔ | ✔ |

## Tentative Schedule

| Week | Task | Description | Completed |
|:----:|:----:|:-----------:|:---------:|
| 1 | Literature Review | Brainstorm Ideas and jot down good ones | ✔ |
| 2 | Literature Review | Brainstorm Ideas, Meet with prof | need to meet with prof |
| 3 | Formulate Problem | Setup the problem with potential solutions | - |
| 4 | Implement Toy Problem | Solve base case and gain intuition | - |
| 5 | Implement Toy Problem | Complete base case solution and interpret results | - |
| 6 | Implement Algorithm | Solve main problem | - |
| 7 | Implement Algorithm | Solve main problem | - |
| 9 | Accumulate Results | Interpret and finalize results | - |
| 10 | Write Report | Draft and finalize report | - |
| 11 | Wrap Project | Package code base and wrap ppt | - |