6/13 Weekly Report

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Progress

- Implemented Environment using GYM
- Environment has several toggles (outage constraint?, sequential UAV connection?...etc), so we can simplify for initial training purposes
- Fully tested and debugged environment

Multi Agent

- Using PettingZoo, environment is coded to handle arbitrary number of agents, acting in parallel

- Parallel actions are assumed for all trainings

- Number of agents specific to each net, transfer learning on this is complex/ topic of research in RL

- Will look into/ discuss in the future

PPO

- Wrote the code for implementing and training a network, PPO algorithm structure (can discuss if desired)

- Algorithm takes UAV environment

- Currently debugging interaction between PPO and environment

Future Plans

- Week of 6/12-6/16: Get any result, algorithm works and behaves logically, pathfinding type algorithm

- Week of 6/19-6/23: Increase complexity of reward function and environment to hopefully get meaningful results, find knowledgeable folks to get ideas