Rohan Ashish Potdar

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EDUCATION

Purdue University, West Lafayette, IN — August 2020 – May 2023
BS Computer Engineering; Minors in Physics and Mathematics; GPA: 3.89

EXPERIENCE

Anyscale (Software Engineering Intern): May 2022 – August 2022

- Worked on RLlib, a library for scalable reinforcement learning, built on top of Ray
- Implemented Doubly Robust Off-Policy Evaluation, an algorithm for evaluating policies on offline data
- Supported customer use cases for offline RL on contextual bandits and recommender systems
- Engaged in RLlib API refactoring and reviewed pull requests to enhance usability
- Prototyped end-to-end RL on a GPU, resulting in 5-10x speedup over CPU-based environments

Project Boom (Avionics Team Member): July 2020 – July 2021

- International student project building a supersonic autonomous aircraft: https://theprojectboom.org/
- Developed internal simulation and control software using JSBSim and ArduPilot (C++, Docker, Python)
- Cut costs and improved reliability by researching IMUs, GPS, and other supersonic flight-rated hardware

Teaching Assistant (ECE 36800 - Data Structures): August 2021 – December 2021

- Holding office hours and recitations to help students with data structures, algorithms and C programming

RESEARCH AND PROJECTS

Neural-MMO @ Purdue: August 2021 – December 2021

- Led research group working on multi-agent reinforcement learning for the Neural-MMO Challenge
- Implemented RL policies with Attention and Long-Short Term Memory and ran distributed hyperparameter tuning on a multi-GPU instance using Ray, RLlib, and Tune
- Supervised team of six students by assigning tasks and discussing papers in deep reinforcement learning

Reinforcement Learning (RL): May 2021 – Current

- Selecting papers and organizing presentations on RL at the Purdue ML Reading Group
- Contributed bug fixes and feature requests for RL libraries such as OpenAI Gym, PettingZoo and RLlib
- Maintainer of 12 OpenAI Gym environments through gym-algorithmic and gym-legacy-toytext
- Extended Counterfactual Multi-Agent Policy Gradient to off-policy learning and continuous action spaces through the Purdue Summer Undergraduate Research Fellowship (SURF 2021)

Online Simulation of Multi-Agent Drone Systems (SWARM): January 2021 – May 2021

- Created a multi-drone simulator as a part of Purdue's SWARM research team (Python, JSON, UNIX)
- Developed a simulated communications system using multithreading, multiprocessing, and BSD sockets

SKILLS

- Languages: Python, C, C++, Java
- Libraries: RLlib, Ray, PyTorch, TensorFlow, JAX, stable-baselines3, scikit-learn
- Tools: Git, BuildKite (CI/CD), Docker, AWS, GCP, LaTeX

RELEVANT COURSEWORK

CURRENT: * GRADUATE: +

Reinforcement Learning Theory^{+}(A), Artificial Intelligence^{+}(A), Robotics^{+}(A),
Computational Complexity (A), Real Analysis*, Abstract Algebra*, Compilers*