Rohan Ashish Potdar

rapotdar@purdue.edu GitHub Linkedin Website

EDUCATION

Purdue University, West Lafayette, IN — August 2020 – December 2023
BS in Computer Engineering; Minor in Mathematics; GPA: 3.81

EXPERIENCE

Anyscale (Software Engineering Intern): January 2023 – July 2023

- Finetuned GPT-J-6B using RLHF with TRLX on multi-node and multi-GPU clusters
- Used retrieval-augmented context generation with language models to generate optimized Ray code
- Designed offline RL API for industry applications such as contextual bandits and recommender systems

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

- Worked on RLlib, a library for large-scale distributed reinforcement learning, built on top of Ray
- Implemented Doubly Robust Off-Policy Evaluation in RLlib to evaluate policies on offline data
- Prototyped end-to-end RL on a GPU using JAX and RLlib, with 10x speedup over CPU-based environments

Teaching Assistant:

- ECE 57000 - Artificial Intelligence — August 2023 – December 2023
- ECE 36800 - Data Structures — August 2021 – December 2021

RESEARCH AND PROJECTS

Machine Learning:

- Researching optimized LLM inference on GPUs using Speculative Decoding
- Selecting papers and organizing presentations on LLMs and RL at the Purdue ML Reading Group
- Contributing to open-source RL libraries such as OpenAI Gym, PettingZoo and RLlib

Neural-MMO: May 2021 – December 2021

- Extended Counterfactual Multi-Agent Policy Gradient to off-policy continuous action spaces (SURF 2021)
- Led a student research group working on multi-agent reinforcement learning for the Neural-MMO Challenge
- Implemented PPO with Attention using RLLib and ran distributed hyperparameter tuning with Optuna

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)

SKILLS

- Languages: Python, C, C++, Java
- Libraries: RLlib, Ray, DeepSpeed, PyTorch, TensorFlow, Wandbb
- Tools: Git, BuildKite, Docker, LaTeX

RELEVANT COURSEWORK

CURRENT: * GRADUATE: +

Reinforcement Learning Theory^{+}(A), Artificial Intelligence^{+}(A), Robotics^{+}(A),
Computational Complexity(A), Large Language Models^{+*}, Algorithms*, Computer Networks^{+}*