NEEV PARIKH

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EXPERIENCE

Research Engineering Intern
Common Sense Machines

📅 May 2021 – August 2021   📍 Boston, MA

- Implemented large-scale, auto-regressive Seq2Seq models for working with 3D geometry from images.
- Worked with Deepspeed to explore scaling options for 500M+ param models to feasibly scale existing sequence-based models.
- Implemented a graphics algorithm to find surface patches in a 3D wireframe (Zhang et. al., 2013)
- Dockerized AWS pipeline to create cloud-independent dev/production environment.

Research Assistant
Intelligent Robot Lab

📅 Jun 2020 – Present   📍 Providence, RI

- Working on Reinforcement Learning/Robotics research, advised by **Prof. George Konidaris**
- New mathematical framework (LOMDPs) for robot domains
- Unsupervised representation learning for improving RL
- Graph-based priors for improving multi-task and RL performance

Machine Learning Intern
Myelin Foundry

📅 Jun 2019 – Aug 2019   📍 Bangalore, India

- Developed a cutting-edge, deep-learning based pipeline in Pytorch and Tensorflow to augment VFX workflows for a POC product.
- Researched and managed a company-wide, cloud-compute platform, reducing potential monthly costs by 70%.
- Helped transition MLOps to Microsoft Azure.
- Implemented DeepLabv3+ from **ECCV 2018** to develop SOTA pipelines for semantic segmentation tasks.
- Achieved 90% in business-aligned metrics with reasonable inference time.

PUBLICATIONS
*equal contribution

- N. Parikh*, Z. Horvitz*, N. Srinvasan*, A. Shah, and G. Konidaris (Oct. 2020). "Graph Embedding Priors for Multi-task Deep Reinforcement Learning". In: *NeurIPS 2020. KR2ML Workshop*.
- C. Allen, N. Parikh, and G. Konidaris (Oct. 2020). "Learning Markov State Abstractions for Deep Reinforcement Learning". In: *NeurIPS 2020. Workshop on Deep Reinforcement Learning*.
- K. Asadi, N. Parikh, R. Parr, G. Konidaris, and M. Littman (Sept. 2020). "Deep Radial-Basis Value Functions for Continuous Control". In: *35th AAAI Conference on Artificial Intelligence 2021*.
- M. Merlin, N. Parikh, E. Rosen, and G. Konidaris (May 2020). "Locally Observable Markov Decision Process". In: *International Conference on Robotics and Automation. Workshop on Perception, Action, Learning*.

EDUCATION

M.Sc. in Computer Science
Brown University

📅 Aug 2018 – May 2022 (Concurrent)
🎓 GPA: 4.0

Advised by: **Prof. George Konidaris**

B.Sc. in Computer Science
Brown University

📅 Aug 2018 – May 2022 (Concurrent)
🎓 GPA: 3.9

Advised by: **Prof. Michael Littman**

Graduate Courses

ML with Limited Labeled Data	Robotics
Machine Language Processing	
Reintegrating AI	Prescriptive Analytics
ML Theory Seminar	Intro to RL (IS)

Undergraduate Courses

Distributed Systems	Computer Vision
Accelerated Intro CS	Intro to Systems
Linear Algebra	Convex Optimization
Probability & Statistics	Microeconomics
Honors Multivariable Calc.	Algorithms

PROJECTS

Onager
Lightweight hyperparameter tuning and experiment management, with interfaces to Slurm and Gridengine clusters
○ camall3n/onager

Hierarchical Doom
High-throughput, distributed RL project to implement async. PPO-OC (Proximal Policy Optimized - Option Critic) on the VizDoom environment
○ neevparikh/hierarchical-doom

SKILLS

Python	Golang	C	Tensorflow
Pytorch	Numpy	Machine Learning
Slurm	Gridengine	AWS	Azure
Google Cloud	Docker	Git	Haskell