NEEV PARIKH

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EXPERIENCE

Software Engineer

Stripe

📋 Jul 2022 – Present

San Francisco, CA

- · Working on the Financial Data/Ledger team
- Building terabyte-scale Hadoop-based data pipelines in Scala Spark to ingest financial data in a double-entry bookkept Ledger.
- Building polished data-repair tooling for internal developer use
- Building high-performance internal canary-based monitoring services in lava

Research Engineering Intern

Common Sense Machines

May 2021 – Aug 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 Blender-based Gym environment for RL to optimize textures on a 3D model.
- 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.

Machine Learning Intern

Myelin Foundry

- **i** 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.

Research Assistant

i Jun 2020 – May 2022

Brown University

Providence, RI

• Worked on original research on unsupervised, representation learning and multi-task reinforcement learning; see publications.

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 (Dec. 2021). "Learning Markov State Abstractions for Deep Reinforcement Learning". In: 34th Neural Information Processing Systems Conference 2021.
- 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

- **a** Aug 2018 May 2022 (Concurrent)
- **GPA:** 4.0

Advised by: **Prof. George Konidaris**

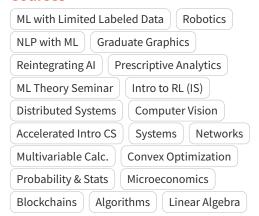
B.Sc. in Computer Science **Brown University**

a Aug 2018 – May 2022 (Concurrent)

GPA: 3.9

Advised by: Prof. Michael Littman

Courses



PROJECTS

IP/TCP

Implements the IP/TCP system on an abstracted virtual link layer in Rust, with split horizon and poison reverse.

neevparikh/ip-tcp

Volumetric Photon Mapping

Implements volumetric photon mapping on a Rust-based path tracer, based on Bitterli et. al., (presentation)

neevparikh/ip-tcp

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

Pytorch Python Machine Learning			
Rust	++ Slurm	n AWS	Azure
Numpy Golang C Tensorflow			
Google Cloud Doo		ker Git	Haskell