

Viraj Joshi

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EDUCATION

UT AUSTIN

MS IN COMPUTER SCIENCE

Cum. GPA: 4.00 / 4.00

Expected Spring 2025

BS IN COMPUTER SCIENCE

BS IN MATHEMATICS

Cum. GPA: 3.85 / 4.00

Awards: GE STAR Scholarship

LINKS

github.com/Viraj-Joshi

viraj-joshi.github.io

COURSEWORK

GRADUATE

Advances in Generative Modeling

Deep Learning

Grounded NLP

Model-Based Optimal Control

Optimization

Reinforcement Learning

Robotic Manipulation

UNDERGRADUATE

Algorithms

Artificial Intelligence

Applied Statistics

Data Structures

Discrete Math

Differential Equations

Intro to Mathematical Statistics

Intro To Quantum Info. Sci. (Honors)

Intro To Stochastic Processes

Numerical Analysis

Partial Differential Equations

Predictive Analytics

SKILLS

PROGRAMMING

Python (PyTorch) • R

• React • Java

RESEARCH

UT LEARNING AGENTS LAB | GRADUATE RESEARCH ASSISTANT

September 2023 -

- Introduced a unified benchmark for multi-task reinforcement learning that includes a diverse set of tasks in the manipulation and locomotion domains implemented in NVIDIA IsaacGym. Publication Pending.
- Researching how the distribution-matching perspective to inverse reinforcement learning can be used to simplify and improve large language model post-training (thesis)

EXPERIENCE

AMAZON | SOFTWARE DEVELOPMENT ENGINEER INTERN | ALEXA AI

July 2021 - Oct. 2021

- Designed and implemented lasting functionality to aggregate metrics on localization of Alexa features leading to the deprecation of legacy processes and improving customer's ease of use
- Exposure to full end-to-end Amazon software development cycle with the creation of customer-facing UI wired to back-end APIs hosted on AWS Lambda
- Technologies Used:
 - Tech: Python (Backend), React / Javascript (Frontend), Enzyme / Jest / Pytest (Testing), Balsamiq (Wireframing)
 - AWS: API Gateway, DynamoDB, EC2, Lambda, Cloudwatch, CDK

CAPITAL ONE | DATA ENGINEERING INTERN

Jun 2020 - Aug. 2020

- Visualized and quantified Risk Control Assurance by building an ETL pipeline, Python-Flask microservice, and UI with directed graphs and metrics
- Utilized AWS (Neptune, Gremlin), Python, React, G6.js, Plotly.js, Jenkins, Scrum/Agile development
- Buy in/Interest from SVPs, VPs, Senior Directors, Directors

ANALYTICS ADVISORY GROUP, LLC | DATA SCIENCE INTERN

June 2019 - Aug 2019

- Augmented the ability to demo to multiple clients how our application on an Amazon Echo Show simplifies BI-related queries to their databases by automating the generation of realistic clinical data unique to each provider
- Accomplished through a web-app/RESTful API (React, MS SQL Stored Procedure, Express, Elastic Beanstalk)

PROJECTS

MLDS CLUB COMPETITIONS | PyTorch, R

- Trained segmentation models for OCR and created an ensemble of supervised learning models, winning 2nd and 3rd place in two competitions hosted by the UT MLDS Club

PYSUPERTUXKART | PyTorch

- Created a PySuperTuxKart ice hockey gym environment for RL agents and won 3rd place in the class tournament using a vision-based approach