

AAKASH KRISHNA GS

Edmonton, AB,

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EDUCATION

MSc (Thesis) in Computing Science

University of Alberta

- Specialization in Applied Reinforcement Learning

Edmonton, Canada

2021 to present

B. Tech. Computer Science

Amrita School of Engineering

- Graduated **First Class with Distinction**
- Top **10%** of class

Coimbatore, India

2015 to 2019

WORK EXPERIENCE

Graduate Research Assistant

University of Alberta

- Working under Dr. Omid Ardakanian on offline policy selection for transfer learning in RL

Edmonton, Alberta

May 2022 - present

Graduate Teaching Assistant

University of Alberta

- TA for CMPUT 174: Intro to Foundations of Computation, Fall 2021
- TA for CMPUT 275: Intro to Tangible Computing 1, Winter 2022

Edmonton, Alberta

September 2021 - March 2022

Research Engineer, Data and Decision Sciences Group

TCS Research and Innovation

- Built an Electric Vehicle (EV) user behavior and traffic simulator for Luxembourg City
- Developed Reinforcement Learning based pricing algorithms to manage demand-supply of EV Chargers
- Developed and integrated a parallel execution system to help speed up and automate the training process; Cutting execution times in half

Bangalore, India

July 2019 - Aug 2021

Research Intern, Data and Decision Sciences Group

TCS Research and Innovation

- Implemented several cyber physical models for solar PhotoVoltaic (PV) cells
- Built a test suite for analyzing large scale solar PV behavior when faults are introduced
- This test suite helped generate data to validate existing, and develop new fault detection and classification algorithms

Hyderabad, India

January 2019 - July 2019

Software Development Intern

Thermo Fisher Scientific

- Responsible for building an automation solution for the Thermo Scientific Spinnaker™ robotic arm
- Built a custom dataset and trained CNN based object detectors to help it identify specific locations on different Thermo Scientific instruments
- This robot removes the need for saving these locations manually, and automates the entire process for transporting hazardous chemicals from/to various biomedical instruments

Bangalore, India

May 2018 - July 2018

PUBLICATIONS

- [1] Tianyu Zhang, [Aakash Krishna GS](#), Mohammad Afshari, Petr Musilek, Matthew E. Taylor, Omid Ardakanian. 2022. “Diversity for Transfer in Learning-based Control of Buildings”. In Proceedings of the Thirteenth ACM International Conference on Future Energy Systems (e-Energy '22). doi.org/10.1145/3538637.3539615.
- [2] [Aakash Krishna](#), Ajay Narayanan, Sunil Krishnakumar, Prasant Misra, Arunchandar Vasan, Venkatesh Sarangan, and Anand Sivasubramanian. 2020. “Uberizing The Charging Ecosystem For Electric Vehicles”. Proceedings Of The Eleventh ACM International Conference On Future Energy Systems. doi:10.1145/3396851.3397758.
- [3] [Aakash Krishna GS](#), Vijay Nirmal Pon, Saumya Rai, and A Baskar. 2020. “Vision System With 3D Audio Feedback To Assist Navigation For Visually Impaired”. Procedia Computer Science 167: 235-243. doi:10.1016/j.procs.2020.03.216.

PROJECTS

Freelance Project: Prostate Cancer Classification

Python, PyTorch, Image Processing, Whole Slide Image Classification, Medical Image Analysis

Jan 2021 - Aug 2021

- Developed a novel Multi-Stage approach for Prostate Cancer Classification for class imbalance
- This method achieves around 30% better performance when compared to a single neural network trained for classification
- Developed a REST API for users to access this model and deployed it on AWS Lambda
- Designed and developed a front-end user interface. (<https://master.dtf8yl7z39jhy.amplifyapp.com/>)

StockMate

Python, Tensorflow, Reinforcement Learning, AI

June 2020 - Sep 2020

- Built a python framework for creating stock price predictors and automated trading agents
- Implemented several ANN based predictors and various RL based trading bots using the framework
- Built a web UI for viewing agent decisions and or stock predictions
- Built a chatbot to let the user know of any job updates and or agent decisions

EXTRA CURRICULAR

Organizer of t{know} Club

Amrita School of Engineering

2016 to 2018

- Organized and conducted multiple events such as coding competitions, hackathons etc.
- Conducted seminars on various topics such as building chatbots, web-scraping etc.

Office Bearer of ASCII Club

Amrita School of Engineering

2017

- Helped organize and conduct events for our official coding club

ACCOLADES

- **Best Outgoing Student**, Suguna PIP School
- **Adarsh Vidyarthi** (Given to class toppers), Suguna PIP School

** clicking on the project name takes you to a website showcasing the work*

** or visit the “projects” page on my personal website*