Prakhar Dixit

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WORK EXPERIENCE

UNIVERSITY OF MARYLAND BALTIMORE COUNTY | Graduate Research Assistant   Baltimore, Maryland | Jan 2022 – Present

- Implemented Hierarchical Reinforcement Learning on low-powered nano drones agent scheme that enables the agent to learn the skill of navigating to multiple goals hierarchically which can be deployed in the real world.
- Implemented Sim2Real , where we train an RL algorithm in simulation and transfer it to the real robot to see how well it performs.
- Worked on Multi-Agent Reinforcement Learning using evaluative feedback methods and showcased how can agents harness the information contained in human-generated signals of reward* to learn sequential decision-making tasks.
- Currently working on how the Sample Efficiency in Reinforcement Learning is affected using Relational Representations and Visual Information.

UNIVERSITY OF MARYLAND BALTIMORE COUNTY | Graduate Assistant   Baltimore, Maryland | Aug 2021 – Dec 2021

- Worked as a graduate assistant for the course CMSC 691.4 **Introduction to data science**.
- The role involved grading the assignments and helping the professor in deciding the projects for the students.

TITAN COMPANY LIMITED | Software Engineer   Bangalore , India | July 2019 – April 2021

- Built a module for a web application using **Spring Boot** and **Rest APIs** which helped more than 8000 employees to visualize their assets data stored in **Oracle DB**.
- Automated the payroll health check-up System with the help of **Batch Scripting** .
- Built a dashboard using **Python** and its framework **Plotly** which was used to derive insights and analyse the daily Logins happening on the web application.

TITAN COMPANY LIMITED | Software Engineer Intern   Bangalore , India | March 2019 - June 2019

- Tested and Worked with various applications and the software development cycle of the Company.
- Tested and Handled the applications related to BPM (Business Process Management).

NATIONAL UNIVERSITY OF SINGAPORE | Research Intern   Singapore, Singapore | Jun 2018 – Jul 2018

- Researched in the field of **big data and deep learning**.
- Worked on credit card fraud detection dataset and achieved an accuracy score of **0.985** using **logistic regression which outperformed ANN, random forest, decision tree, Support vector machines (SVM)**.

DELHI TECHNICAL UNIVERSITY | Summer Intern   New Delhi, India | Jun 2017 – Jul 2017

- Built an Android app development on Student Database Management System using **Android Studio and Gradle at Delhi Technical University**.

EDUCATION

PhD in Computer Science   Baltimore , Maryland | Aug 2023
University Of Maryland Baltimore County

MS in Computer Science   Baltimore , Maryland | May 2023
University Of Maryland Baltimore County

B.Tech in Computer Science Engineering   Chennai, India | May 2019
SRM Institute of Science and Technology

PROJECTS

LLM DETECT AI TEXT ⬈   Python, Large Language Models, NLP, Text Classification, Machine Learning

- A Competition which challenged participants to develop a machine learning model that can accurately detect whether an essay was written by a student or an LLM.We finished in the **Top 25%** in the final Leaderboard.

EXPLORER ⬈   Python, Android Dev, Tensorflow Lite, Tensorflow API, Machine Learning

- An android application which lets visually impaired users know the place of a given object selected via the app itself and localize it within the given frame of the picture.

DEEP LEARNING STEERING MODEL ⬈   Python, Deep Learning, Opencv, Image Recognition

- Built a Self Driving Prototype which Uses Convolutional Neural Networks and OpenCv for the steering system of the vehicle which took images with steering angle as a label and returned the correct steering angle as label.

INTERNATIONAL SPACE STATION - INFO ⬈   Python,Pip,NASA,ISS,Pypi

- Built a Python wrapper and Library for tracking information about the International Space Station using **open-notify.org API**. Published and Registered the Package under Official The Python Package Index (PyPI), it is a repository of software for the Python programming language.Completed more than **32000+ downloads of the Package till current Date**.

RESEARCH PUBLICATIONS AND PRESENTATIONS

- Poster Presenter at the **Python Conference 2023** at **Salt Lake City , Utah**
- Workshop paper accepted in the workshop **"Reinforcement Learning Ready for Production Workshop"** in **AAAI 2023** at Walter E. Washington Convention Center, Washington DC, USA.
- Published and presented a paper in Robotics Science and System Conference 2022 under the Workshop **"Closing the Reality Gap in Sim2Real Transfer for Robotics" at Columbia University in New York City**.
- Poster Presented my research work in front of researchers of the United States Army Research Laboratory, United States Naval Research, Professors of **University of Maryland College Park at Maryland Robotics Center in University of Maryland College Park**.
- Poster Presentation of my research work in front of the President of the **University of Maryland Baltimore County** in the Research Symposium RetriEVER Empowered Student Success Research.

AWARDS AND RECOGNITION

- Winner of the **Human-Guided System Adaptation (HSA) Science Hackathon by DEVCOM Army Research Laboratory in Collaboration with Columbia University** .
- Received the best review paper award in **International Conference on Internet Of Things(ICIoT 2019**).
- Runners up in intra level university quiz competition at **University of Maryland Baltimore County**.
- Part of Top 5 finalist team in a national level student racing competition **FORMULA Bharat**.