

ADARSH HIREMATH

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EDUCATION

Masters of Science in Computer Science

Ira A. Fulton Schools of Engineering, Arizona State University (ASU), Tempe, Arizona

December 2024

3.92/4.0

Experience : Teaching Assistant - MAT 170, Gallery Attendant

Bachelor of Engineering(B.E.) in Information Science and Engineering

Visvesvaraya Technological University (VTU), Bengaluru, India

July 2022

8.6/10.0

SKILLS & CERTIFICATIONS

- Technical Skills:** Python, JavaScript, C/C++, Bash, Java, MongoDB, PostgreSQL, Snowflake
- Frameworks:** Flask, Django, Android Studio, ReactJS, MVC
- Certifications:** AWS Machine Learning Foundations, DeepLearning.AI TensorFlow Developer Professional [more](#)

EXPERIENCE

Graduate Research Assistant

August 2023 - Present

Arizona State University - Logos Robotics Lab

Tempe, AZ

- Developing an algorithmic framework for changepoint detection in complex, long-horizon tasks using statistical testing methods, facilitating precise task segmentation in high-dimensional robotics domains.
- Anticipating outcomes encompassing accurate task segmentation, streamlined knowledge transfer to reinforcement stages, and seamless integration of multi-task learning paradigms within robotic systems.

Machine Learning Research Intern

May 2022 - August 2022

Indian Institute of Science (IISc)

Bengaluru, India

- Utilized auto-regressive models for real-world agricultural time-series forecasting achieving under 5% forecasting errors in price and arrival volume predictions.
- Enhanced model performance by implementing cutting-edge embedding techniques using PyTorch libraries resulting in a reduction of the coefficient of variance from 19.67% to 17.2%.

Full-stack Developer (freelance)

February 2021 - April 2021

EducoHire

Surat, India

- Conceptualized a robust educator jobs portal using the Django framework and PostgreSQL catalyzing a 75% increase in successful educator placements based on recruiter surveys.
- Engineered a real-time data scraping mechanism using BeautifulSoup and Selenium Webdriver, leading to a 48% increase in website reach and a 37% growth in user base for employed applicants.

Software developer Intern

September 2020 - November 2020

CodeSpeedy Technology

Kolkata, India

- Applied Naive Bayes Classifier using Natural Language Toolkit for predicting user sentiment from chatbot data, used for streamlining ticket escalation and reducing average customer response time by 13 hours.
- Collaborated with the computer vision team to perform advertisement information retrieval using OpenCV and PyTesseract, achieving a character accuracy of 93%.

ACADEMIC PROJECTS

Automated File Processing System with AWS Infrastructure (AWS-CDK, API Gateway, Cognito, ec2, s3, Lambda) March 2024

- Spearheaded the development of an automated file processing system to streamline data handling processes. Developed a responsive web UI in a serverless manner, enabling direct file upload to Amazon S3, reducing manual workload.
- Decreased manual effort by 80%, facilitating processing of over 10,000 files monthly with an average time of under 5 minutes per file.

Braille Keyboard for Smartphones (Android Studio, Java, SQLite)

September 2023 - November 2023

- Led the development of the Braille Keyboard project to enhance digital accessibility for visually impaired individuals and integrating Contracted Braille, propelling a notable increase in typing speed from 65 cpm to 90 cpm.
- Conducted User Studies to refine the system based on natural gestures, employing a flexible approach and incorporating feedback, culminating in a User-Friendliness Score of 3.7 out of 5 for the inclusive solution.

Enhancing Autonomous Vehicle Safety (MATLAB, Simulink, Flutter)

August 2023 - September 2023

- Implemented Google Maps API for real-time traffic monitoring in an autonomous driving app, assessing cognitive workload through 8 parameter combinations.
- Developed a Fuzzy Logic-based advisory control system for autonomous braking in a Vehicular Ad Hoc Network using Simulink models, successfully reducing collision incidents to near 0 and minimizing switching counts under varying cognitive workloads.

Symbolic Deep Reinforcement Learning (CLINGO, PyTorch, Python, Reinforcement Learning)

August 2022 - December 2022

- Reimplemented the Symbolic Deep Reinforcement Learning (SDRL) framework using CLINGO seamlessly integrating symbolic planning and hierarchical decision-making.
- Revamping the validation approach, the project substantiated the framework's prowess through empirical results, showcasing success rates of over 90% in intricate sequential tasks.

CO-CURRICULAR & ACHIEVEMENTS

- Art of Living:** Facilitated meditation and breathwork for 300+ students at SKY campus as a Trained Meditation facilitator. [Link](#)
- Research Funding:** Awarded MORE funding at ASU for Fall 2023 among 100+ applicants for the funding. [Link](#)
- Fellowship:** Accorded ACM IKDD Uplink 2022 Fellowship. Top 10 among the 300+ applicants from among 100 institutes. [Link](#)
- Founded and Headed a tech organization of 100+ people - CodingCrib, spearheaded teams and involved in conducting events, hands-on seminars to acquaint people with latest computer technologies and a platform for collaboration. [Link](#)