RIDHEESH AMARTHYA

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EDUCATION

University of Southern California, Los Angeles, California   **Jun 2025**
Master of Science in Computer Science
- Member of the Graduate Student Government

Amity University, Haryana, India   **Jun 2023**
Master of Technology in Artificial Intelligence & Robotics
Relevant Coursework: Data Science, Machine Learning, NLP, Automation, Computer Networks, Computer Architecture, Robotics
- Primary Course Representative, Gold Medalist: Awarded for securing the highest GPA in the department

SKILLS

- **Languages & Frameworks:** C, C++, C#, Java, Python, CUDA, TensorFlow, JavaScript, TypeScript, React, Express, Node
- **Dev Tools:** GDB, Valgrind, CMake, Vim, GIT, REST, Hadoop, Docker, Kubernetes, Selenium, GraphQL, Copilot
- **Cloud Platforms:** Azure, AWS (EC2, S3, RDS), GCP, Docket Compose, Terraform
- **Databases:** MongoDB, Oracle SQL, PostgreSQL, MySQL, Cassandra, HDFS
- **Spoken Languages:** English, Hindi, Tamil, Telugu, Japanese (Amateur)
- **Soft Skills:** Scrum, Agile Methodologies, Team Collaboration, Problem Solver, Time Management, Quick Learner, Proactive

WORK EXPERIENCE

Data Scientist: Firstplanit, London, United Kingdom (Remote)   **Jul 2022 – Nov 2024**
- Spearheaded data pipeline for thousands of products, including ingestion, batch processing, and validation.
- Extracted data from EPDs, Manufacturer websites, Certifications, and Technical Datasheets. Key data points include functional units, global warming potential, acidification potential, eutrophication potential, material composition, etc.
- Integrated LLMs into the data pipelines, massively boosting data extraction times. Tested on 50,000+ files.
- Developed comprehensive Standard Operating Procedures (SOP) documents detailing the end-to-end process of data scraping, processing, and uploading to the website, ensuring consistency and efficiency.

Software Engineer: Green International ExImp, New Delhi, India   **Jul 2020 – Jun 2022**
- Project management for a company profile website on AWS S3, incorporating MongoDB; optimized testing pipelines on AWS EC2 using Bash scripts and Selenium automation, enhancing logging, tracking, and error handling.
- Deployed and tested Restful APIs, focusing on responsive design within the MERN stack; ensured unit testing and seamless integration for enhanced functionality. Reducing testing time by 50% and improving error detection efficiency.

RESEARCH EXPERIENCE

Graduate Student Researcher Amity University [*doi.org/10.1007/978-981-99-7383-5_35*]   **Jul 2021 – Aug 2023**
- Lead author for an international research effort on a machine learning project on autonomous thrust vectoring, culminating in an award-winning paper. Improved landing accuracy from 74% to 95% with Greedy algorithms.

PROJECTS

CSCI 530 Security Lab Projects
- Cryptographic Algorithm Implementation: Implemented RSA and AES algorithms to secure communications.
- Web Application Security: Evaluated websites for vulnerabilities like SQL injection & XSS & implemented solutions.

Weenix Operating System
- Engineered a Unix-link operating system kernel as part of an academic project for Operating Systems.
- Contributions included architecting a process management system with context switching, designing and implementing device drivers for hardware interfacing, and constructing a Virtual File System (VFS) for streamlined data management.
- Implemented a virtual memory management system and page fault resolution up to 1000 per second.

INSAT 3D/3DR Satellite Data Visualization | Python, Flask, Point Cloud, Hadoop, Smart India Hackathon 2022
- Visualized cloud height with point clouds for 50% of the earth's surface using INSAT 3DR satellite data from MOSDAC.
- Presented to the **Prime Minister of India.** Collaborated with the **Indian Space Research Organization (ISRO)**.

AI-Enabled Game Engine | Python, PyTorch, C++, OpenGL, Low Level Programming
- Programmed a game engine from scratch using OpenGL, with a rendering engine, object loader, and virtual camera.
- Fed low-level raster data to train a GAN Model for real-time frame generation. A 19% increase in performance.

LogAR - iOS | Swift, SwiftUI, Unity, Vuforia
- Created an iOS application with Vuforia for data visualization in a 3D AR environment. Tested with 22 students.