Sharukesh M B.Tech (AID)

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Profile Summary

Driven and technically adept Third-Year AI & Data Science student proficient in Python ,Java, and C. Skilled in designing and deploying scalable ML and real-time systems, with hands-on experience in deep learning, robotics control, and API development. Strong aptitude for optimization, high-performance computing, and building robust, societally beneficial solutions. Eager to apply analytical and problem-solving skills in collaborative, innovative environments.

Education

B. Tech in Artificial Intelligence & Data Science
CGPA: 8.54 (Current)
Amrita School of AI, Amrita Vishwa Vidyapeetham, Coimbatore

High school & Higher secondary from Sri Chaitanya techno school

Skills

Python
C/C++
Java
Machine Learning
Deep Learning
Computer Vision
Robotics Control
Docker & k8s
API Development
Linux/Ubuntu Environment
High-Performance Computing & Optimization
Data Science
Analytical Problem-Solving
Collaborative Teamwork

Certifications

IIT Madras
Degree in Data Science and Applications

Perusing diploma in programming and Data Science

Internship Experience

AI APPLICATION ENGINEER INCEPT AI.
March 2025 – April 2025

Designed and developed plugins for Microsoft Security Copilot to enhance security workflows. Built RAG pipelines using DeepSeek R1 for context-aware KQL generation. Implemented agentic workflows for dynamic prompt rewriting and adaptive KQL construction. Collaborated with engineers to deploy plugins using CI/CD pipelines. Improved SOC efficiency by automating query generation and reducing analyst response time.

Projects

MICROBIOME CAUSALITY ANALYSIS (STANFORD UNIVERSITY USA)

Analyzed human gut and saliva microbiome and metabolomic data to identify causal relationships using Granger causality tests. Discovered directionality in microbial interactions and theorized associated metabolites involved in their regulation. Built an AI validation pipeline using web scraping and a custom deep research workflow to confirm microbiome cause-effect pairs. Collaborated across biology and data science teams to ensure statistical rigor and biological relevance of findings.

Other Academic projects

- DDOS prediction using neural networks
- Maze solver using reinforcement learning
- Automated report writing using screen shots of the detected threat
- Text compression using Huffman encoding, LZ77, LZW
- Database indexing using B+ trees
- Remote controlled robotic arm
- Smart home energy management system
- Autonomous delivery robot
- Quiz master (IIT-M Diploma project)
- Remote controlled robotic dog

Hobbies

AUTONOMOUS GESTURE-CONTROLLED ROBOT – KOVAI TERRIERS (TERRITORIAL ARMY IN INDIA)

Developed a SLAM-enabled robot for Kovai Terriers, capable of autonomous navigation in unknown environments. Integrated a real-time segmentation model using an onboard camera to distinguish drivable and non-drivable regions. Implemented gesture-based remote control over Wi-Fi using a laptop camera, enabling intuitive operation without specialized hardware. Combined robotics, computer vision, and wireless communication to deliver a robust system demonstrated in live terrain navigation scenarios.

HYDROGEN STORAGE NLP PLATFORM

Built an end-to-end summarization and RAG Q&A system on a custom dataset of the latest hydrogen storage research papers. Curated and preprocessed full-text articles to generate paired document–summary examples. Fine-tuned Facebook's BART model for high-quality abstractive summaries. Developed a retrieval pipeline to fetch relevant text passages, then combined them with the fine-tuned BART decoder for context-aware question answering.

SKIN LESION CLASSIFICATION

Designed and implemented a multi-task CNN combining U-Net–based segmentation and ResNet–based classification for accurate skin lesion analysis. Developed a secure web/mobile UI enabling patients to upload lesion images, receive model-generated diagnoses, and explore personalized treatment recommendations. Integrated geolocation services to suggest nearby dermatologists and provided in-app appointment booking with calendar integration and push notifications using RESTful APIs with FastAPI and PostgreSQL

Papers published