Harshitha M

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Summary

Motivated engineering student with strong foundations in software development, IoT, and machine learning, and proven leadership as Vice-Chair of IEEE WIE, with proven execution skills and commitment to continuous learning.

Education

RV University | Bachelors of Technology (Hons.) in Computer Science — 2023 - 2027
Major – AI and ML , Minor - Innovation, Entrepreneurship, Product Development — GPA - 8.03

Vidya Mandir Independent PU College | Pre-University in PCMB | 89% — 2021 - 2023

B P Indian Public School | School 10th grade, ICSE | 89% — 2009 - 2021

Experience

IEEE Women in Engineering (WIE), RV University — April 2025 - Present
Vice - Chair

- Led IEEE technical programs focused on skill development, mentorship, and high student engagement.
- Coordinated cross-functional teams to foster collaboration and inclusive engineering leadership.

Summer Internship, RV University — June 2025 - July 2025
Student Intern | AI-Based Generative Design of Launch Vehicle Payload Fairing

- Optimized payload fairing designs using NSGA-II to minimize mass and cost under safety constraints.
- Analyzed NASA-based synthetic datasets to derive structurally efficient, Pareto-optimal aerospace designs.

Academic Projects

- **Astronomad (Mars Rover Prototype)** | *Arduino, C, Python*
  Developed a NASA Mars inspired sensor-based rover to assess human habitability in inaccessible terrains using real-time environmental data.
- **Stock Market Analysis & Prediction Platform** (Agile & DevOps) | *React, Flask, Python, API*
  Full-stack web app with real-time market data, screening, CI/CD (Git Actions), authentication, & responsive UI.
- **IoT-Based Pothole Detection System** | *IoT, Arduino, Python*
  Built an IoT system to detect road potholes using ultrasonic sensor data with GPS-based location tracking. Automated real-time data logging by exporting sensor readings to Google Sheets for analysis and monitoring.
- **Customer Churn Prediction** (Introduction to ML) | *Python, Decision Tree, Random Forest, XGBoost, SMOTE*
  Built and compared Decision Tree, Random Forest, and XGBoost models on the Telco dataset using SMOTE to handle class imbalance. Evaluated models with standard ML metrics, with XGBoost achieving the best performance and real-world insights.
- **Pre-Crop & Post-Harvest Smart Agriculture System** | *Sensors, C*
  Built an IoT-driven smart system enabling soil monitoring, automated irrigation, and intelligent grain storage.
- **Smart Traffic Light System** (Computer Networks Mini Project) | *Cisco Packet Tracer, JavaScript*
  Simulated an IoT-based traffic signal with pedestrian motion detection, automated LED/LCD control, and network routing. Set up routing, DHCP, and cloud connectivity for real-time traffic automation.
- **SocioDrift – Brand Jingle Generator** | *HTML, CSS, APIs*
  Designed and implemented a web application that transforms brand and product inputs into customized jingles, streamlining creative marketing through automated content generation.

Additional

- Finalist in 2 national hackathons (HacXerve, Hackfinity), developing prototypes for smart agriculture & fintech.
- Directed the planning and execution of hackathons and technical workshops as Vice-Chair, IEEE WIE.
- Developed SEAL, a board game awarded Best Game for creativity and gameplay design.
- Certified by NPTEL in Design & Implementation of Human Interface