

ROSHAN MELVIN G A

B.E. Computer Science & Engineering (IoT) | Chennai, India
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EDUCATION

Sri Sairam Engineering College, Chennai Bachelor of Engineering in Computer Science and Engineering (Internet of Things)	2023 - 2027 CGPA: 8.27 / 10
Belfield Matriculation Higher Secondary School Higher Secondary Education (Computer Science with Mathematics)	2022 - 2023 Score: 90.67%

WORK EXPERIENCE & INTERSHIPS

Co-Founder, Adapt Robotics (Student Venture) - Engineered a differential-drive guide robot on NVIDIA Jetson supporting both manual teleoperation and autonomous navigation via ROS2 - Built SLAM-based mapping and localization using RViz to enable autonomous, obstacle-aware navigation for visitor guidance - Developed a web application for real-time monitoring, manual override, and route configuration	11/2024 - 02/2025 Onsite
InternPe - Web Development Intern - Built responsive web applications using modern frameworks - Implemented RESTful APIs to enable seamless data integration across application components - Optimized application performance, reducing load times by 30%	06/2024 - 07/2024 Remote

PROJECTS

SelfieMtrx - AI Image Analysis (GitHub) - Designed and implemented a machine-learning-based system for predicting physical attributes from images with 92% accuracy, integrating deep learning models and real-time image analysis Tools: Python, OpenCV, TensorFlow, MediaPipe, Flask, Hugging Face, RAG (Vector Embeddings)
Titan Personal Assistant (GitHub) - Developed a voice-controlled IoT assistant integrating MQTT communication and facial recognition for secure user authentication Tools: Python, MQTT, OpenCV, Flask, ESP32, Arduino
ANISCAN AR - Pet's Skin Diagnostics - Created an augmented reality tool for pet skin diagnostics, achieving 70-80% diagnostic accuracy Tools: Unity3D, Vuforia, TensorFlow Lite, OpenCV, Python
Tyech-Erase - Secure Data Erasure System (GitHub) - Engineered an enterprise-grade, NIST SP 800-88 compliant secure data erasure system using NVMe Sanitize and hardware-level cryptography, achieving erasure speeds up to 1,000x faster (approximately 2 seconds) Tools: Python, Flask, Linux Kernel, NVMe Sanitize, Hardware Cryptography

TECHNICAL SKILLS

Programming Languages: Java, Python, C, C++, HTML5, CSS3, JavaScript
Frameworks & Libraries: TensorFlow, OpenCV, Flask, FastAPI, Vuforia, Unity ML-Agents
Technologies & Platforms: IoT Controllers, Sensors, MQTT, Docker, Firebase, Figma, RAG, MCP
Tools & Software: Git, VS Code, Wireshark, Cisco Packet Tracer, Microsoft Office, Fusion 360, ROS2
Domains: Machine Learning, MLOps, Augmented Reality (AR), Robotics, Embedded Systems, Web Development, Networking, Cybersecurity
Soft Skills: Project Leadership, Cross-Functional Team Coordination, Analytical Decision-Making, Rapid Learning & Adaptation

RELEVANT COURSEWORK

- Web and System Design for AI Applications	- Robotics and ROS2 Framework
- Cybersecurity and Ethical Hacking Principles	- Flutter App Development and AR Technologies
- Computer Vision and Machine Learning	- AI Agents and Machine Learning
- Embedded Systems and IoT Architecture	

ACHIEVEMENTS & ACTIVITIES

- IEEE IMS Undergraduate Scholarship Award (2026)** - Recipient of \$2,000 USD award from IEEE Instrumentation and Measurement Society; includes Student Membership, IEEE IMS Magazine feature, and recognition at I2MTC 2027, Chongqing, China
- Winner, DeepBlue Season 10 (2025)** - Delivered an innovative solution addressing real-world challenges, securing first place out of 10,000+ participants in the nationwide hackathon
- 3rd Prize, IEEE HKN International Hackathon (2025)** - Shipped a full-stack, Dockerized budget management platform for global IEEE HKN chapters
- Winner, NEXUS 1.0 UI/UX Symposium (2023)** - Earned an internship opportunity at Fluezen Technologies Pvt. Ltd., Chennai
- 2nd Runner-up, AIOTA 2.0 (NEXUS 2.0) Hardware Project Expo (2024)** - Presented the Advanced Emergency Braking System (AEBS) and TITAN: AI Chatbot
- 3rd Prize, Sairam SDG Solveathon 4.0 (2025)** - Addressed Sustainable Development Goal 15
- Finalist (Top 100 Teams), Hack4Purpose Hackathon (2024); Finalist, DeepBlue Season 11 (2026); Igen Green Volunteer Award (2024)**