RANUSHA RAMESH

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Github | Portfolio | Chennai, Tamil Nadu, India.

As an undergraduate passionate about web development and AI, I bring expertise in Python, JavaScript, React, Flask, SQL, and MongoDB, along with hands-on experience in model training, CNNs, LSTMs, and frameworks like PyTorch, TensorFlow, and OpenCV. I'm also expanding my skills in UI/UX design and database optimization to create seamless, user-centric solutions. Eager to grow and collaborate, I aim to contribute to impactful projects that blend technology, design, and innovation.

STRENGTHS AND EXPERTISE

Artificial Intelligence	Deep Learning	Leadership
Data Management	Ui/Ux Design	Communication
Machine Learning	Full Stack Development	Technical Proficiency & Adaptability

PROFESSIONAL EXPERIENCE

Arabian International Company Steel - Intern — **Dec 2025 - Present**
Role - ML & Technology Intern
Currently engaged in developing AI-driven solutions for practical industry use cases.

Smart India Hackathon 2025 Finalist — **Aug 2025- Dec 2025**
Role -ML and Team Coordinator
Developed an IoT- and ML-based EMG device enabling real-world, day-to-day human–computer interaction through muscle signals.

Meras Plugins Pvt Ltd| IITM Research Park — **Jul 2025 - Oct 2025**
AI & ML Intern

MIT SQUARE - Intern — **Oct 2024-Oct 2025**
Role -TL & AI Solutions Architect
Developed PathGuide, an AI-driven traffic system using YOLOv11 for real-time detection and dynamic traffic optimization.

Algo University Scholar — **Aug 2024-June 2025**
Top 13% in Algo University Technology Fellowship Accelerator Camp Scholar

Hackathon Finalist at VIT Chennai 2025 — **April 2025**
Role : TL & ML
Designed an EMG sensor-based hand gesture recognition system for intuitive, real-time cursor control and screen navigation, advancing non-invasive human-computer interaction.

HackWithIndia BuildWithIndia Finalist — **March 2025**
Role : TL & Web Developer
Secured top 20% rank at India's premier hackathon, earning a finals spot at Google Office by showcasing collaborative problem-solving and full-stack development.

CYBERJAYA UNI - MALAYSIA — **Oct 2024-Nov 2024**
Role -TL & AI Research Scholar

CLUBS & ORGANIZATIONS

XR Team — **Feb 2025-Present**
Role - Management Team Member

CS CLUB SIST — **Feb 2025-Present**
Role - Vice President

Catalyst CLUB SIST — **Feb 2025-Present**
Role - Technical Team Lead

Youth United Council of India — **June 2023-Jan 2024**
Role - State committe Co-ordinator

EDUCATION

Sathyabama Institute Of Science And Technology **2023- Present**
BE CSE WITH AI
CGPA: 8.68 till IVth Semester

St.Alphonsa Matric Higher Sec School **2016-2023**
Computer Science & Mathematics
HSE : 89%

PUBLICATIONS AND CERTIFICATIONS

TrafficIQ - AI Solution for Urban Mobility : PathGuide

AlgoUniversity ATF Scholar Stage 2

TECH IMPLEMENTATIONS

EMG Signal-Driven Control System **July 2025-Present**

Tech Stack: Python (TensorFlow,LSTM), EMG sensors , Flask, Database,IoT,3D Printing
Created an AI-powered system that interprets muscle signals to control devices hands-free. By capturing electrical activity from arm muscles, the system learns to recognize specific hand gestures (like fist clench or finger taps) with high accuracy. Connected wireless sensors to a user-friendly web interface, enabling real-time control of prosthetics or digital tools. Designed a comfortable wearable sleeve for consistent signal detection and implemented automatic learning from user data to improve gesture recognition over time.

Log Summariser **Sep 2025**

Tech Stack: Python
Developed a log summarisation tool for an EV company to review and organize large volumes of system logs generated during operations and testing. The tool automatically separated successful processes, unsuccessful attempts, and important system events, making it easier to understand what occurred during each run without manually scanning raw logs. This helped teams quickly identify failure patterns, verify successful executions, and track key events, improving clarity and reducing the time spent on log analysis.

Whatsapp Chat Summarizer **June 2025**

Tech Stack: Python (Streamlit, pandas), Google Gemini API, SQLite, Regex
Built an AI tool to help law enforcement quickly understand WhatsApp chats. The system reads exported chat files, identifies who said what and when, and turns messy conversations into clear summaries, to-do items, and important highlights. Created an easy-to-use web interface to upload chats and instantly view results. Past analyses are saved and can be downloaded for reports. Designed to save time, reduce manual work, and make it easier to find key details in long conversations.

EEG Emotion Detection & Intent Prediction System **Jan 2025-March 2025**

Tech Stack: Python (TensorFlow,LSTM), EEG, Flask, Database,IoT,3D Printing
Developed an EEG-based brain–computer interface using machine learning to combine intent-based and emotion-based intelligence. The system predicts a user's left or right decision by interpreting neural patterns related to movement intent, enabling real-time, hands-free control, while also detecting emotional states such as stress, focus, and calmness from brain signals. Designed to adapt to individual users over time, the solution supports practical applications in assistive technologies, interactive systems, and mind-controlled interfaces through a lightweight, IoT-enabled architecture with live web visualization.

TECH IMPLEMENTATIONS

PathGuide **Oct 2024-Jan 2025**

Tech Stack: Python (YOLOv11), OpenCV, Flask, MySQL,IoT
Developed an AI-driven traffic management system, PathGuide, using Python (YOLOv11) for vehicle detection, OpenCV for image processing, and Flask for web deployment. Integrated real-time traffic data, implemented efficient database management using MySQL, and deployed the system for operational use. Ensured smooth communication between AI model, frontend, and backend for real-time monitoring and analysis.

GatherUp **Sep 2024-Dec 2024**

Tech Stack: React.js, Tailwind CSS, JavaScript
Designed a smart coordination platform that helps students, faculty, and administrators easily organize, schedule, and manage academic events, study groups, and campus activities. The platform streamlines communication, tracks RSVPs, sends real-time updates, and offers a dedicated admin dashboard, making campus life more connected and collaborative.

Canteen Management System **Oct 2024**

Tech Stack: React.js, Tailwind CSS, JavaScript
Developed a responsive canteen management platform with dynamic menu browsing, cart functionality, and order placement.Implemented real-time cart updates and product management (add/remove menu items) using React hooks.Designed an intuitive UI with consistent styling through Tailwind CSS and ensured cross-device compatibility.

Qr Code Generator & Attendance Scanner **July 2024**

Tech Stack: Python,Flask, JavaScript, Excel, qrcode, OpenCV, Pandas, ngrok (deployment)
Used Python and Flask to create a system for a workshop, including QR code generation, email distribution, and attendance logging. Deployed with ngrok. Managed Data Efficiently: Handled participant data and attendance logs in Excel. Created a Flask website to scan QR codes and store data. Future Development: Planning to develop a React app for the same

GeneProtect **March 2024**

Tech Stack: Python(Flask), HTML, Tailwind CSS, MySQL
Developed a web app using Python (Flask), HTML, and MySQL, managed via PHPMyAdmin. Implemented CRUD operations, securely stored encrypted user data, and managed database interactions efficiently. Deployed on a hosting platform for 3 months, ensuring smooth and secure interaction between frontend, backend, and database for real-time access