

NALIN VIJAYVARGIYA

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Education

SRM Institute of Science and Technology, Kattankulathur

Aug 2023 – Present

B.Tech in Computer Science and Engineering

CGPA: 9.4/10

Experience

IEEE Computer Society SRMIST

Oct 2024 – Present

Web Developer

Chennai

- Built responsive, visually consistent pages for the IEEE CS website using React and Tailwind CSS.
- Collaborated in feature planning, code reviews, and cross-platform UI implementation to enhance user engagement.
- Contributed to project documentation and followed Git-based workflows for clean, maintainable code.

Projects

RoomiePay – Smart Expense Manager | React, MySQL, Python

Jan 2025 - May 2025

- Designed normalized MySQL schema with triggers, constraints, and monthly resets for accurate expense tracking.
- Built secure full-stack app with React frontend and Python backend supporting real-time expense updates.
- Implemented invite-based group joining with admin approval for streamlined roommate collaboration.
- Enabled dual-confirmation payment flow to ensure consistency and prevent unverified settlements.

Emotion Detection – Facial Emotion Classifier | EfficientNet, OpenCV, FER2013

Mar 2025 - Jun 2025

- Trained a deep CNN on FER2013 using EfficientNet, achieving high accuracy on multi-class emotion recognition.
- Integrated OpenCV with live webcam inference to visualize real-time predictions over facial landmarks.
- Optimized model with data augmentation, learning rate scheduling, and early stopping for robust performance.
- Packaged the system for real-world testing with minimal latency and smooth user feedback experience.

VibeOut – Emotion-Based Workout Assistant | ESP32, MAX30102, React, GenAI

Oct 2024 - May 2025

- Integrated MAX30102 sensor with ESP32 to capture real-time BPM and SpO2 for live health monitoring.
- Synced IoT data to a React app, triggering dynamic workout suggestions based on vitals and emotional state.
- Used GenAI prompts to generate personalized motivational workouts based on user mood and performance.
- Built complete IoT pipeline with ThingSpeak sync, biometric validation, and mobile dashboard visualization.

TaskVerse – Full-Stack Task Management Platform | React, Node.js, MongoDB, JWT

Mar 2025

- Developed a responsive React frontend with animated transitions and intuitive task sorting UX.
- Built RESTful APIs in Node.js with JWT-based auth and MongoDB integration for full user session handling.

AirMouse – Gesture-Controlled Virtual Mouse | MediaPipe, OpenCV, Python

May 2025

- Leveraged MediaPipe's hand-tracking to detect 21 landmarks and mapped gestures to system cursor events.
- Implemented real-time OpenCV pipeline with stable gesture smoothing and error filtering for precision control.
- Added custom gestures for left/right click, drag, scroll, and basic keyboard shortcuts for full control.

Technical Skills

Languages: Python, Java, C, C++, JavaScript, Dart, SQL, HTML, CSS

Web/Mobile Development: React.js, Tailwind CSS, Node.js, Express.js, Flutter, Flask

Databases & Cloud: MySQL, PostgreSQL, MongoDB, Firebase, Vercel, Heroku

AI/ML Tools: TensorFlow, PyTorch, OpenCV, Keras, Scikit-learn, NumPy, Pandas

IoT & Hardware: Arduino, ESP32, Raspberry Pi, ThingSpeak

Tools/Platforms: Git, GitHub, VS Code, PyCharm, Replit, Arduino IDE

Extracurricular

Hackathon Achievements

2024 – 2025

Participant & Winner

India

- Secured Top 3 position in Red Bull Basement Hackathon, developing an innovative tech solution with real-world impact.
- Won 2nd Runner-Up in national-level Enduraverse'25 Hackathon, selected among top 6 teams across India.
- Qualified the Internal Round for Smart India Hackathon 2024 with a functional and scalable project.

Certifications

2023 – 2025

GitHub & AWS Credential Holder

Online

- GitHub Foundations
- AWS Cloud Foundations
- AWS Machine Learning Foundations