LINGOJU GOUTHAM

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PROFILE

Passionate about integrating AI, IoT, and embedded systems, I aim to leverage my skills in software and hardware development to create innovative solutions. As a Telugu enthusiast, I'm excited to contribute to VISWAM.ai's mission of promoting linguistic diversity and empowering marginalized communities. Seeking an internship to apply my expertise in real-world projects, enhance efficiency, and drive impactful technological solutions.

EDUCATION

VNR Vignana Jyothi Institute of Engineering and Technology (VNR VJIET)
Bachelor's Degree (Ongoing)
CGPA: 9.45

TS Model School and Jr. College Maripeda
(Class 12)
Percentage: 97.6%

TS Model School and Jr. College Maripeda
(Class 10)
Percentage: 100%

TECHNICAL SKILLS

- Programming Languages: C, Python, Java, JavaScript, C++
- Version Control: Git, GitHub
- MERN Stack
- Tableau
- SQL
- Arduino

PROJECTS

Campus Automation - Smart Sanitary Napkin Vending Machine
Tech Stack: Raspberry Pi, React.js, Flask, Razorpay API, Firebase, Python, Motor Control (GPIO), Touchscreen

- Designed an automated vending machine with digital payments and motor-controlled dispensing.
- Developed a React.js frontend and a Flask backend to manage payments and stock alerts.
- Implementing real-time monitoring and optimization (ongoing project).
- Implementing a Raspberry Pi with a touchscreen for user interaction and inventory tracking via Firebase (ongoing project).

Campus Automation - Student Verification System – VNRVJIET
Tech Stack: React (Vite, Tailwind, Context API), FastAPI, Firebase Admin SDK, Google Cloud (Drive API, Gemini AI)
Description: A web-based system to manage, verify, and extract student document information for institutional use.
Implementation:

- Designed a secure document upload interface with automated data extraction using Gemini AI.
- Built dynamic student profile management and department-specific dashboards using React and FastAPI.
- Integrated Google Drive API and Firebase Admin SDK for cloud-based storage and authentication.
- Status: Ongoing — core modules deployed; feature expansion and optimization underway.

Retail Store Management System (RSMS)

Tech Stack: Java Swing, JDBC, MySQL

- Developed an inventory and sales management system using Java Swing for the user interface and JDBC for database connectivity with MySQL.
- Enabled real-time tracking of stock levels, sales transactions, and inventory updates.
- Provided features for inventory management, sales processing, and generating detailed reports.
- Designed a user-friendly interface for easy adoption by retail staff with minimal training.

Effect of Fertilizer and Water on Crop Yields

Tech Stack: Python, Streamlit, Pandas, Scikit-Learn, Matplotlib, Linear Regression

- Developed a data-driven web application using Streamlit for crop yield analysis.
- Analyzed the impact of fertilizer usage, water levels, temperature, and humidity on crop yields using linear regression models.
- Processed and visualized Kaggle-based agricultural datasets to derive insights for optimizing resource usage.
- Built an interactive dashboard for farmers and stakeholders to explore predictions and trends.

Detecting Brain Tumor using Quantum Computing

Tech Stack: Quantum Computing, Qiskit, Classical ML/DL (planned), Quantum-Classical Hybrid Models (planned)

Description: Research and development initiative to leverage quantum computing for the early detection of brain tumors through medical image analysis.

Implementation:

- Exploring quantum-enhanced algorithms for image classification using Qiskit.
- Designing hybrid quantum-classical models for MRI image processing and tumor detection.
- Integrating classical machine learning techniques with quantum circuits to optimize performance.
- Status: Ongoing — research proposal, presentation, and prototype development in progress.

Empowering Regional Medium Students in Telangana

Tech Stack: AI/ML, AR/VR, NLP, Chatbot Frameworks

Description: Educational initiative aimed at bridging the English language gap for regional medium students in four backward districts of Telangana using immersive and intelligent technologies.

Implementation:

- Developed an AI-driven chatbot to assist students with real-time English language learning.
- Integrated AR/VR modules to provide interactive, immersive educational content.
- Employed NLP to personalize conversational feedback and improve language fluency.
- Status: Ongoing — solution architecture and prototype refinement underway.

Programming Education Platform (Powered by Moodle)

Tech Stack: Moodle, Custom Backend (for Python, C, Java code execution)

Description: A scalable learning platform integrating live code execution with comprehensive student-faculty interaction and academic resource sharing.

Implementation:

- Customized Moodle to support interactive lesson delivery, note sharing, feedback, and assessments.
- Integrated a backend system for executing Python, C, and Java code in a secure sandbox environment.
- Optimized system to support up to 1000+ concurrent users for real-time educational engagement.
- Status: Ongoing — base integration complete; scaling and deployment in progress.

Smart Traffic Signal Powered by AI

Tech Stack: Python, OpenCV, YOLO

Description: A dynamic traffic signal system that adapts signal flow based on real-time road occupancy, bypassing traditional timer-based switching.

Implementation:

- Utilized OpenCV and YOLO for vehicle detection and real-time lane occupancy analysis.
- Designed an adaptive algorithm to skip green light timers for empty roads.
- Developed a Python-based control logic to interface with simulated signal systems.
- Status: Ongoing — development and testing of core AI modules in progress.

Ledgerly – Offline-First Personal Finance App

Tech Stack: Flutter

Description: A fully offline Android ledger app to record, manage, and secure personal transactions with local-first architecture.

Implementation:

- Built a Flutter-based UI supporting CRUD operations for credits/debits and user-added contacts.
- Implemented timestamped transaction history and summary generation features.
- Ensured complete offline functionality with local storage for data persistence and privacy.
- Status: Ongoing — core features functional; UX refinements in development.

ACHIEVEMENTS

- Awarded 1st place in the Spark C++ Quiz at Convergence 2k25
- Ranked 8th among the Top 100 Coders at VNRVJIET
- Selected as one of 5000 Scholars for the Reliance Foundation Scholarship (2023)
- Achieved a 2-star rating on CodeChef

EXTRACURRICULAR ACTIVITIES

- Peer-to-Peer Learning Program Member, Turing Hut (Programming Club) VNRVJIET.
- Member of CSI VNRVJIET

DECLARATION

I hereby declare that the information furnished in this document is true to the best of my knowledge and I will be responsible for any deviation from the truth of these facts.