Kalivarapu Sai Vignesh

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PROFESSIONAL SUMMARY

- Final-year Computer Science Engineering student with hands-on experience building intelligent systems across machine learning, Android, and full-stack platforms. Passionate about automation and performance optimization, with a strong foundation in modern programming languages and collaborative development.

EDUCATION

- **Woxsen University** — Hyderabad, India
  B.Tech in Computer Science and Engineering; GPA: 3.22/4.0 — 2022 – 2026
- **FIITJEE — Vizag** — Visakhapatnam, India
  Intermediate Education (MPC) — 2020 – 2022

SKILLS SUMMARY

- **Languages**: Python, Java, SQL

- **Frameworks**: Flask, scikit-learn, NumPy, Pandas

- **Tools**: Power BI, Excel, Git, MySQL, MS SQL Server

- **Technologies**: MERN Stack, Data Analytics, Android (Kotlin)

- **Deployment Tools**: Vercel, Netlify

- **Soft Skills**: Problem Solving, Team Collaboration

WORK EXPERIENCE

- **ISRO – Sri Harikota** — May 2025 – Jun 2025
  Intern — *On-site*
  - **Dashboard Development**: Built an internal dashboard increasing visibility of **15+ project milestones** and improving documentation + financial tracking workflows.
  - **Tech Stack**: Refactored reporting processes by **25%** through JSP, Bootstrap, jQuery, and Tomcat-driven automated visualization.

PROJECTS

- **Agentic Context-Aware Optimizer** — Jul 2025 – Nov 2025
  Autonomous Android Optimization Agent
  - **Context Engine**: Developed an on-device engine analyzing **6+ real-time signals** (battery, network, usage, motion).
  - **Performance Gains**: Increased device battery efficiency by **18–22%** using TinyML + rule-based inference.
  - **Automation**: Systematized adaptive toggles and alerts, lowering manual adjustments by **40%+**.
  - **Repo**: github.com/Vignesh-1221/coptimizer

- **NephroFind** — Dec 2024 – Apr 2025
  Kidney Disease Risk Prediction Platform
  - **ML Pipelines**: Engineered IgAN prediction pipelines achieving **up to 90% accuracy** using XGBoost and scikit-learn.
  - **Dashboard**: Created MERN dashboard aggregating **20+ clinical biomarkers** with real-time scoring.
  - **Pipeline Optimization**: Accelerated preprocessing and inference workflows reducing latency by **30%**.
  - **Repo**: github.com/Vignesh-1221/Nephrofind

- **Air Quality Management System** — Jun 2024 – Nov 2024
  IoT-based Air Purification System
  - **Sensor Network**: Deployed ESP32-based CO + environmental sensing at **1–2 second intervals**.
  - **Forecasting**: Structured LSTM model achieving **¡10% MAPE** for CO forecasting.
  - **Actuation**: Orchestrated purification actuation logic reducing system response time by **3 seconds**.

- **IntelliBank** — Dec 2023 – Apr 2024
  Multilingual Banking Platform
  - **Assistant**: Engineered multilingual banking assistant supporting **5+ Indian languages** using Azure Cognitive Services.
  - **OCR Automation**: Constructed OCR-based form extraction pipelines to automate document processing and reduce manual entry load.
  - **UX Enhancements**: Facilitated instant translation workflows improving accessibility for non-English speakers.

CERTIFICATIONS

- **Build Your Generative AI Productivity Skills — Microsoft Linkedin**: Feb 2026

- **Career Essentials in Generative AI — Microsoft Linkedin**: Jan 2026

- **AWS Cloud Quest: Cloud Practitioner — AWS**: July 2025

- **Build NLP Solution with Azure AI Language — Microsoft**: Dec 2024

- **Introduction to NoSQL Databases — Coursera**: Mar 2024

- **Intelligent Document Processing — Microsoft**: Jan 2024

ACHIEVEMENTS

- **Microsoft Odyssey Challenge 2024** – Completed national-level innovation challenge conducted by Microsoft.

- **National Level VJ Hackathon** – Secured **Top 10 position out of 1000+ teams** nationwide.