VARANASI PAVAN KUMAR

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Portfolio Linkedin GitHub Codolio

SKILLS

- **LANGUAGES** - C , C++, Java, Python, HTML, CSS, Javascript, SQL, Bash
- **FRAMEWORKS -** Django, Flask, FastAPI, Langchain, Langgraph, Livekit(VOICE AI),WebRTC, VAPI,Selenium WebDriver, Pytest, Hugging face
- **AI/ LLM** - RAG, Prompt Eng, AI Agents, Multi-Agent Systems, Tool Calling, MCP
- **TOOLS** - Git, GitHub, Jupyter notebook, VS Code, Cursor, Claude code, Postman, Zapier, Lovable.ai, Twilio, OpenAI, Gemini (LLMs), Cartesia, Elevan Labs
- **DATABASES** - PostgreSQL**,** MySQL, Oracle, Airtable, FAISS, Chroma (Vector DBs)

EDUCATION

- **GAYATRI VIDYA PARISHAD COLLEGE OF ENGINEERING 2021-2025**
  BACHELOR OF TECHNOLOGY IN INFORMATION TECHNOLOGY
  C.G.P.A : 8.73 | Visakhapatnam

ACHIEVEMENTS

- **Smart India Hackathon National Winner** 2023 (PS no: SIH1386) (**Rank 1 among 200+ teams for the problem statement**).
- **Meta Pytorch OpenEnv Hackathon Finalist 2026 (Top 2000 out of 71000+)**
- Reached **3 stars** on **CodeChef**
- Top **5%** in **GSSOC October-Extended 2024** challenge (Open Source Contribution).
- Selected for **Amazon Summer ML Summer School 2024 (Top 3000 out of 85000 participants)**
- Secured **6th place** in a Coding competition "**COOK THE CODE**"
- Highest **Leetcode** Contest rating : 1562

WORK EXPERIENCE

UPRISELABS PVT LTD | **AI ENGINEER** (Python | FastAPI | AI Agents | Livekit) July 2025 - Present

- Contributing to the development and enhancement of **AI-driven voice and video interview modules** for **Gappeo.ai**, an **AI hiring platform**, improving candidate evaluation processes.
- Improved **video interview evaluation accuracy from 70% to 85%** by implementing a **QA-based pair evaluation system.**
- Implemented an **AI-driven proctoring system for technical assessments and video interviews** that detects **prohibited objects, multiple persons, and head pose using YOLO and Azure head-pose models.**
- Implemented a **queue-based voice calling system to manage concurrent calls, handle platform concurrency limits**, and ensure reliable call execution at scale.
- Developed and configured **multilingual voice agents for diverse business use cases**, optimizing **language-specific prompts** and speech configurations for performance and cost efficiency.
- Improved **performance of video call** by adding noise cancellation, tool calling, enabling **voice activity detection, reducing latency by 40%,** improved **transcript quaility by 30% by using assemblyAI.**
- Built **AI agents for candidate smart search and job creation** using prompt-driven workflows**, achieving response times under 2 seconds.**

- Implemented an **AI-assisted interview system** where an agent **observes live conversations, analyzes participant inputs, and recommends the next set of questions to recruiters in real time (<2s latency)**, integrated with **interview scheduling** and **Google Calendar event sync.**
- Developed a **low-latency WebSocket-based real-time messaging system** enabling recruiters and candidates to exchange messages, share files, receive live notifications, and track **online/offline presence**. Integrated internal recruiter chat, unifying external and internal communication workflows.
- Developed a **visual, workflow-based automation module**, similar to n8n and Zapier, enabling recruiters to configure hiring stages through drag-and-drop nodes, define conditional rules, and **automate recruitment workflows** based on predefined conditions
- Built a **dynamic AI voice interview agent** that adapts interview questions based on candidate responses and recruiter-defined rules. Integrated **tool calling** to automate interview workflows, including call termination, email notifications, and custom recruiter actions.
- Improved speech recognition and synthesis quality by implementing **context-aware STT prompting and TTS pronunciation dictionaries**, enhancing recognition of domain-specific terminology and ensuring accurate pronunciation of names, technical terms, and custom vocabulary.
- Integrated automated testing of LiveKit-based voice agents using **LiveKit Agent Simulations**, designing **positive and negative test scenarios** to validate agent behaviour, response accuracy, and edge-case handling.
- Built and scaled voice AI agents across multiple business use cases, handling an average of **10,000+ minutes of conversations daily** while maintaining **P95 latency under 2 seconds.**

LEADBIRD.IO | Software Engineering Intern March2025 - July2025

- Developed **automation solutions using Python,** integrating external APIs, **Airtable, and Smartlead** for streamlined workflows. Built robust full-stack applications using **Lovable.ai, integrated with FastAPI-based backend APIs.**
- Designed and implemented **automation workflows in Zapier, connecting various third-party applications including Smartlead**. Worked on **optimizing existing implementations** to improve performance and scalability.
- Implemented asynchronous programming methods to improve API efficiency
- Actively supported Customer Success Managers (CSMs) by resolving **technical queries and providing reliable solutions.**

PROJECTS

LENS VOICE SHOP (Python | Livekit | OpenAI | WebRTC) Code

- Built a **multi-agent LiveKit voice shopper** (orchestrator, search, details, cart) with **sub-1s agent handoffs**
- Wired **STT→LLM→TTS (AssemblyAI, OpenAI, Cartesia)** and real-time UI sync over **LiveKit RPC**
- Added **guardrails for scope, stock, and Rx validation** to keep voice cart **flows safe and on-domain**

INSUBOT (Python | RAG | Streamlit | FAISS | Hybrid Search) Code

- Developed a **Retrieval-Augmented Generation (RAG) chatbot** using Mistral-7B, **FAISS** vector database, and **hybrid retrieval** to answer queries from complex insurance policy documents with **80%+ contextual answer accuracy.**
- Built the **RAG ingestion pipeline by automating PDF parsing**, semantic/paragraph chunking, embedding generation, and vector indexing in FAISS, while leveraging **Zephyr-7B** for structured information extraction and retrieval-ready document processing.
- Built with **Streamlit**, enabling **real-time QA, document upload,** and scalable **knowledge base** enrichment via **PDF ingestion.**

TITAN (Python | Flask | PicoVoice | googletrans | gTTS) Code

- A web application for **dubbing videos** from **English** to various **Indian regional languages**
- Enabled users to **upload videos** in .mp4 format or provide **Youtube links.**
- Implemented a **6-step approach** to dub videos, **automatically detecting the number of speakers** and their **genders to generate appropriate voices** which achieved **75% accuracy.**