VAMSI KRISHNA KOLLIPARA

kolliparavamsikrishna80@gmail.com | **812-223-8818** | LinkedIn | Portfolio | **Greater Seattle Area** (Ready to Relocate)

SUMMARY

AI Engineer with expertise in building AI-driven automation systems, specializing in **voice AI, retrieval-augmented generation (RAG), and multi-channel customer interactions**. Experience in **developing end-to-end AI-powered customer service solutions** using **Python, TypeScript, Node.js, and PostgreSQL**. Proven ability to optimize sales and support workflows through **AI-driven automation, NLP, and scalable cloud solutions**. Passionate about **leveraging AI to drive measurable business outcomes and revenue growth**.

EDUCATION

Master's in computer science, Indiana State University | Terre Haute, IN | GPA: 3.75 **Aug 2023 – Present**
Course work: Cloud Computing, Artificial Intelligence**,** Data Visualization, Research (Machine Learning), Database Management Systems, Web Programming, Operating Systems

Bachelor's in Electronics and Communication Engineering, Vel Tech | Chennai, India | GPA: 9.01 **Jul 2018 – May 2022**
Course work: Deep Learning, Machine Learning, Major Project (Raspberry pi, ML), Minor Project (Esp32, LoRa), Python, C Programming, Java, Technical Communication, Design Thinking

SKILLS

Languages & Frameworks: Python, TypeScript, Node.js, JavaScript, SQL
AI & Machine Learning: NLP, RAG systems, LlamaParser, OpenAI, LangChain, LangGraph
Voice AI & Conversational Systems: Twilio, LiveKit, OpenPhone, Mastra, Whisper
Databases & Cloud: PostgreSQL, Redis, Pinecone, AWS, Docker, CI/CD
Agent Orchestration & Automation: Temporal, Model Context Protocol (MCP), Power Automate
Web & Frontend: React.js, Next.js, Express.js
Knowledge Retrieval & Search: Multi-vector retrieval, hybrid lexical-semantic search
Development Tools: Git, WindSurf, Cursor IDE, VS Code

RELEVANT EXPERIENCE

Graduate Research & Teaching Assistant, Indiana State University | Terre Haute, IN **Aug 2023 – Present**

- Developed a **voice AI chatbot** leveraging **LLMs, RAG, and retrieval systems** to assist students with university policies and deadlines, enhancing engagement.
- Engineered **multi-channel AI automation** (voice, email, and chat) for student queries, reducing manual intervention.
- Designed **intelligent escalation systems** that analyze conversations and route students to human advisors when necessary.
- Implemented **LlamaParser-based document parsing** for automated policy and academic document retrieval.
- Built an AI-powered grading automation system, cutting grading time by 80% while maintaining accuracy.
- Developed a **graph-based conversation memory system (Zep AI)** to enhance chatbot contextual retention.
- Led lab sessions on **operating systems, database management, and cloud infrastructure**, assisting students in system design and implementation.

Data Analyst, Cognizant Technology Solutions | Hyderabad, India **Jul 2022 – Jul 2023**

- Optimized data processing pipelines for **1M+ records**, improving system efficiency by 25%.
- Integrated **AI-driven data retrieval mechanisms** for operational analytics.
- Automated data transformation workflows, cutting manual effort by 40%.
- Designed **PostgreSQL and Redis-backed customer data architectures** to ensure high availability.

Data Analyst Intern, Cognizant Technology Solutions | Hyderabad, India **Jan 2022 – May 2022**

- Developed **ETL processes** using Informatica PowerCenter, ensuring high-accuracy data processing.
- Created **interactive storage analytics dashboards** in Power BI for real-time system monitoring.
- Worked with **distributed storage environments**, improving data integration efficiency.

OPEN-SOURCE CONTRIBUTIONS

Co-developed WebWeaver, a Python library for browser automation and web scraping, published on PyPI. link **Sept 2024**

CERTIFICATIONS/ PUBLICATIONS

Certified Full Stack Developer with Cloud for Web and Mobile (Hero Vired) **Nov 2023**

12th International Conference on Science and Innovative Engineering | Chennai, India **Jul 2022**
A New Paradigm of Smart Embedded System for Elder and Physically Challenged Person Using Raspberry Pi
ISBN: 978-93-81288-22-1