VARA PRASAD

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PROFESSIONAL SUMMARY

Computer Science professional specializing in AI/ML and Data Engineering with strong fundamentals in data structures, algorithms, and system design. Proficient in building scalable, AI-integrated software solutions using Python, SQL, RESTful APIs, and cloud platforms. Experienced in writing clean, maintainable code, collaborating with cross-functional teams, and continuously learning emerging frameworks. Delivered production-grade ML pipelines and contributed to end-to-end product development with a user-focused mindset.

EXPERIENCE

Texas Tech University   **Aug 2023-Present**
AI/ML Lab Student assistant, Advanced Technology Learning Center (IT Dpt.) | Python, SQL, Git, Pandas, NumPy   Lubbock, Texas
- Designed and deployed software modules for data processing, ML inference, and system monitoring across 50+ machines used by researchers.
- Built RESTful APIs and integrated ML models with real-time research platforms, enabling cross-functional users to query and visualize results.
- Maintained clean, production-grade code using Git, Docker, and MLflow for versioning and model deployment.
- Led sprint reviews and documented SOPs for technicians, improving collaboration and code quality within the lab's hybrid team.
- Collaborated with IT, design, and research teams to implement software infrastructure that meets usability and performance standards.

REVA University   **Jul 2022 – May 2023**
Machine Learning Research Assistant | Python, TensorFlow, Keras, Deep Learning, Anaconda   Bangalore, India
- Built deep learning systems for real-time gesture-to-speech translation using CNN, LSTM, and GRU architecture
- Refactored training pipelines using memory-efficient sequence techniques, improving training scalability and code readability.

ACADEMIC PROJECTS

Privacy-Preserving Disease Risk Predictor | Python, Ten SEAL, CKKS, SQLite, Flask
- Created secure API endpoints for encrypted inference using homomorphic encryption and ML models, showcasing backend integration with AI systems.

LLM-based Network Security Chatbot | RAG, LangChain, FAISS, OpenAI API, Jupyter
- Developed a full-stack LLM-powered chatbot that ingests 200+ network security documents, using semantic search and OpenAI embeddings for intelligent Q&A.
- Built fallback logic and API endpoints using Flask, improving robustness and reducing query response latency by 45%.
- Designed with modular architecture to simulate real-world deployment with user-facing components.

Personalized AI Financial Advisor | Google GenAI API, SQLite, Alpha Vantage
- Built an AI assistant that integrates real-time market data with user preferences for personalized investment advice.
- Implemented modular RESTful services, prompt logic, and feedback tracking, simulating continuous model improvement in production.

SKILLS

- **Machine Learning & GenAI**: LLMs, Agents, RAG, Model Development, Model Evaluation, Neural Networks, Transformers, NLP
- **Data Analysis**: Exploratory Data Analysis, Hypothesis Testing, A/B Testing, Data Visualization, Python Data tools, Hadoop, PySpark
- **Programming & Cloud**: Python, SQL, Git, Amazon Web Services (AWS), Big Query, Docker, Kubernetes, Jenkins, Linux Commands
- **Libraries & Tools**: Databricks, OpenAI, Pandas, Excel, NumPy, Matplotlib, Hugging Face, PyTorch, TensorFlow, Keras, Scikit-Learn, Seaborn, OpenCV, Tableau, SageMaker, vLLM, TensorRT-LLM, Advance Excel

EDUCATION

- Masters in computer science, Texas Tech University, Texas, United States – 2023-2025 | CGPA: 3.55
  Coursework: Operating System, DBMS, Cryptography, Artificial Intelligence, Algorithms, Neural Networks, Data Analysis
- Bachelors in Electronics and Computers, REVA University, Bangalore, India – 2019-2023 | CGPA: 9.14
  Coursework: Data Engineering, Machine Learning, Deep Learning, Web Development, Software Development, Data Science

CERTIFICATIONS

- Google Data Analytics Professional Certification