

Durga Rao Bojja

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Phone: +1 (859) 287-7221

Location: Louisville, Kentucky, USA

Profile

Machine Learning Engineer and Software Engineer with 4+ years of experience developing enterprise applications, AI-powered solutions, and scalable software systems. Master of Science in Computer Science, University of Louisville, May 2026 with specialization in Artificial Intelligence, Machine Learning, Deep Learning, and Natural Language Processing. Experienced in Python, Large Language Models (LLMs), Generative AI, RAG, Model Evaluation, Data Engineering, and AI Safety. Skilled in building intelligent applications using PyTorch, TensorFlow, Hugging Face, Scikit-learn, Pandas, and NumPy, with hands-on experience in cloud technologies, CI/CD pipelines, and modern software development practices.

Education

Master of Science in Computer Science

08/2024 – 05/2026

University of Louisville, Kentucky, USA

- **Specialization:** Machine Learning, Artificial Intelligence, Deep Learning, NLP, Data Mining, Cloud Computing
- **Core Coursework:** Machine Learning, Deep Learning, NLP, Statistical Learning, Data Mining, Cloud Architecture, Advanced Algorithms, Database Systems

Bachelor of Technology in Computer Science

2018 – 2022

PACE Institute of Technology and Sciences, India

Skills

- **Programming:** Python, Java, SQL, JavaScript, C
- **Machine Learning & AI:** Machine Learning, Deep Learning, NLP, Generative AI, LLMs, Responsible AI, AI Safety, Model Evaluation, Model Fine-Tuning, Content Safety
- **LLM & GenAI:** GPT-4, Gemini, RAG, Prompt Engineering, LLM Evaluation, Supervised Fine-Tuning (SFT), LLM Alignment, RLHF Concepts, Bias Detection, Safety Benchmarking, Responsible AI Metrics, Prompt Injection Testing, Red Teaming
- **AI Frameworks & Libraries:** LangChain, PyTorch, Scikit-learn, Hugging Face Transformers, OpenCV,
- **Backend & Frameworks:** TensorFlow, FastAPI, ReactJS, Tornado, REST API
- **Data:** Pandas, NumPy, EDA, Data Preprocessing
- **DevOps & Deployment:** Docker, AWS, Kubernetes, Jenkins, CI/CD, Git, Jira
- **Databases:** MongoDB, MySQL
- **AI Tools:** OpenAI API, ChatGPT, Claude, Gemini, GitHub Copilot, AI Agents, Embedding Models

Professional Experience

Software Engineer

06/2022 – 09/2024

Tata Consultancy Services

Hyderabad, India

- Developed and optimized enterprise applications using Java, Python, ReactJS, Node.js, and MySQL.
- Worked in Agile teams with CI/CD pipelines using Jenkins, Kubernetes, Git, and Jira.
- Built Python-based automation scripts for data processing, monitoring, and reporting.
- Performed data analysis and debugging to improve system reliability and performance.
- Modernized customer service web systems and improved backend performance.
- Migrated legacy systems into scalable microservices architecture.
- Automated deployment workflows using containerized pipelines.
- Developed secure financial transaction modules and authentication systems.
- Implemented encryption and secure token-based access control.
- Built automation testing suites using Selenium for regression testing.
- Developed and tested RESTful APIs using **Postman**, ensuring secure and reliable backend integration.

- Held a part-time campus position at the University of Louisville while earning a Master of Science in Computer Science.

Trevexa Health Solutions | Louisville | AI Engineer

10/2025 – present

- Developed and deployed a responsive healthcare technology website for Trevexa Health Solutions using React, modern frontend frameworks, and AI-assisted development tools to deliver a scalable and user-friendly web application.
- Built reusable UI components, implemented responsive layouts, and optimized website performance to ensure seamless user experiences across desktop, tablet, and mobile devices.
- Configured hosting environments, managed production deployments, and performed end-to-end testing to ensure application reliability, security, and availability.
- Worked directly with stakeholders to gather requirements, implement new features, resolve issues, and continuously improve functionality based on user feedback.

Projects

UNIQUEST AI – LLM-Based University Recommendation & Evaluation System**Tech Stack:** Python, GPT-4, Gemini, LangChain, RAG, Pandas, NumPy

- Built an AI-powered recommendation system using Large Language Models (GPT-4, Gemini).
- Designed LLM evaluation pipelines for accuracy, hallucination detection, fairness, and safety scoring.
- Developed evaluation benchmarks for hallucination detection, safety scoring, and responsible AI assessment.
- Implemented Retrieval-Augmented Generation (RAG) for improved response relevance.
- Performed data preprocessing, EDA, and feature engineering using Pandas and NumPy.
- Developed multilingual prompt testing datasets for robust model evaluation.

Enterprise Knowledge Assistant (RAG & LLMs)**Tech Stack:** Python, LangChain, OpenAI GPT-4o-mini, Hugging Face Embeddings, FAISS, Streamlit

- Built a RAG-based AI assistant to query PDF/TXT documents using natural language.
- Implemented document ingestion, chunking, embeddings, and FAISS vector search for accurate retrieval.
- Integrated LangChain with OpenAI models for context-aware Q&A with source citation.
- Developed a Streamlit UI for document upload and interactive chat experience.
- Evaluated models using Precision, Recall, F1-Score, Confusion Matrix, and Safety Compliance Metrics.
- Developed red-teaming datasets and safety guardrails for improving LLM behavior and reliability.

Email Automation Agent (LLMs & MCP)**Tech Stack:** Python, LangChain, MCP, OpenAI GPT, Zapier, FastAPI, REST APIs

- Built an AI agent to automate email drafting and workflow execution using LLMs and MCP.
- Integrated Zapier and APIs to trigger email workflows and external actions.
- Designed prompt workflows for personalized email generation and follow-ups.
- Automated communication tasks, improving efficiency and reducing manual effort.

Certifications

- Machine Learning Specialization – DeepLearning.AI
- Deep Learning Specialization – DeepLearning.AI
- Generative AI Fundamentals – Google Cloud
- Python for Data Science and AI
- Cloud Computing Fundamentals

Languages

English (Professional), Telugu (Native)