Krishnakumar Vijayasankar

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SUMMARY

Passionate Software Developer with great problem-solving skills having experience at Ford and a Master's in Applied AI. Skilled in building scalable applications and developing end-to-end AI/ML solutions, bridging coding best practices with advanced machine learning to deliver impactful real-world systems.

EDUCATION

Masters in Applied AI | Northeastern University, Boston, MA | September 2025 - Present

• Relevant Subjects: Applied AI, NLP, CV, Deep Learning, Neural networks etc.

Bachelors in Information Technology | Sri Krishna College, Coimbatore, IN | September 2019 – March 2023

• Relevant Subjects: Data Structures, Algorithms, Computer networks, DBMS etc.

WORK EXPERIENCE

Software Engineer | Ford Motor Company, Chennai, IN | November 2023 - August 2025

- Developed scalable web applications using **Google cloud**, **Spring Boot**, and **Angular**, enhancing maintenance workflows for thousands of internal clients.
- Built internal tools and eliminated third-party dependencies, resulting in \$10K+ annual cost savings.
- Designed, maintained Collections and published secure RESTful APIs to app servers, enabling seamless integration via API Gateway.
- Streamlined DevOps pipelines using **Tekton**, **Jenkins**, **SonarQube**, **FOSSA**, and **Checkmarx** to improve code quality and deployment reliability.
- Deployed microservices on GCP Cloud Run, leveraging Docker and CI/CD best practices for cloud-native performance.

PROJECTS

- Real-Time Recipe Recommendation System (Computer Vision):
 - Built a CV system to detect ingredients from images and recommend recipes ranked by user health goals (fat loss, muscle gain, maintenance).
 - Impact: Reduced food waste, supported healthy eating.
 - o **Tech Stack:** Python, TensorFlow, OpenCV, Flask
- AI-Driven Mental Health Risk Detection (NLP):
 - Developed an NLP-based system that analyzes social media engagement patterns to identify unhealthy behaviors and recommend wellness interventions.
 - Impact: Early detection of mental health risks and wellness recommendations.
 - Tech Stack: Python, PyTorch, Hugging Face Transformers, NLTK
- Personal Portfolio Did using plain HTML, CSS, Javascript to enhance my online presence
- Intelligent Knowledge Assistant (LLM + RAG)
 - Implemented a RAG-based QA system that retrieves domain-specific documents and generates grounded, citation-backed answers using LLMs.
 - o Impact: Reduced hallucination, improved explainability and productivity.
 - o Tech Stack: Python, LangChain, FAISS, GPT-4, Streamlit/FastAPI

TECHNICAL SKILLS

- Programming & Frameworks: Python, Java, SQL, JavaScript, C++ (cuda), Angular, Spring boot, FastAPI
- Machine Learning & AI: PyTorch, TensorFlow, Scikit-learn, Hugging Face Transformers, LangChain
- Data & Cloud: Pandas, NumPy, Spark, GCP, Docker, FastAPI, Streamlit
- Databases: MySQL, MongoDB, FAISS, Pinecone, Elasticsearch