Kadhiravan Gopal

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Summary

Software Developer with experience in Generative AI and full-stack development, specializing in Python. Successfully fine-tuned 7+ large language models and built RAG pipelines, enhancing response accuracy by 75%. Deployed scalable applications on Azure and AWS, reducing release cycles to 48 hours. Eager to leverage Python expertise to drive innovation and efficiency in a Python Engineer role.

EXPERIENCE

LTIMindtree   **Jul 2022 - Jul 2024**
Software Developer   *India*
- Boosted response accuracy by 75%, optimized 7+ large language models / implemented RAG pipelines. Brought down resolution time by 40%, delivered 5+ client demos.
- Led 5-member team, 100% sprint completion in 18 months. Delivered 8+ full-stack AI apps (Flask, Angular, and MongoDB/PostgreSQL) in a Greenfield setup.
- Reduced release cycles from 3 weeks to 48 hours by deploying scalable apps on Azure & AWS; automated documentation and image processing with Azure AI Vision & Form Recognizer, cutting manual effort by 60%; mentored 2 juniors, enhancing their skills and contributing to their Rising Star of the Quarter award

PROJECTS

Efficient Scheme to Obtain Background Image in Video for YOLO-based Static Object Recognition   **Apr 2025 - May 2025**
- Improved system performance and image quality by 20% and reliability by 25% by reverse-engineering and optimizing a research-based background estimation algorithm.

Enhanced-CCTV System   **Jan 2022 - Jun 2022**
- Built an AI-based CCTV monitoring system with features such as facial recognition, gender and age detection, animal detection, time bookmarking, and data logging to CSV using machine learning, achieving 85% accuracy.

Self-Driving car Simulation   **Jul 2021 - Dec 2022**
- Developed a machine learning-based simulation of a self-driving car on the Unity platform using reinforcement learning, reaching a 70% parking success rate in randomly generated city environments.

Android Custom ROM Development and Testing   **Jan 2019 - Apr 2021**
- Constructed a custom operating system based on Lineage OS for POCO F1 smartphone with Android studio and tested over 150 variants of custom ROMs developed by various contributors for Xiaomi devices in XDA Developers community, ensuring quality and performance across diverse configurations.

SKILLS

- **Languages**: Python, C/C++, C#, Java, Bash
- **Version Control**: Git (GitHub, GitLab and Bit Bucket)
- **Vector Stores**: MongoDB and Quadrant DB
- **Database**: MongoDB, Oracle and PostgreSQL
- **Frameworks and Technologies**: Linux, LlamaIndex, LangChain, Tensorflow, Pytorch, Docker, OpenCV and CMake
- **Cloud Platforms**: Azure (App Service, Azure Kubernetes Service, Container Registry, AI Vision, Form Recognizer), AWS (ECS, Elastic Container Registry, EC2)
- **Certifications**: Oracle Certified Associate Oracle 1Z0-071 Certification, Azure Fundamentals Certification (Azure AZ-900)
- **Leadership**: Team Management, Conflict Resolution, Strategic Planning, Cross-functional Collaboration, Delegation, Project Demo Management and Presentation

PUBLICATIONS

- Bridging the Skill Gap between Academia and Industry in Punjab: A Case Study. Authored and published a research paper on ICETC (International Conference on Education Technology and Computers) on education and emigration in Punjab.

EDUCATION

Illinois Institute of Technology   **Jan 2025 - Dec 2026**
MS, Artificial Intelligence   *Chicago*
- **GPA:** 3.33/4.0

Anna University   **Jun 2022**
B.E, Computer Science Engineering   *India*
- **GPA:** 8.72/10