Anand Harikrishnan

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Education

Model Engineering College — Kochi
Bachelor of Technology in Computer Science — *November 2020 - June 2024*

Chavara Public School — Pala
Higher Secondary Education — *June 2018 - June 2020*

Experience

Software Engineer — June 2024 – Present
Abilytics Inc — *Kochi*

- Architected and maintained the backend of an AI-powered Incident Management System built on a FastAPI-based microservices architecture, integrating PostgreSQL, Redis, Qdrant, and Loki for data management, with Celery for background task processing and Google ADK agents for intelligent incident automation.
- Worked on integrating GitHub, Jira, Slack, Azure DevOps, and Microsoft Teams using MCP and Rest APIs to import multi-platform incidents and enable resolution directly within communication platforms.
- Obtained the AWS Certified Cloud Practitioner certification during tenure, improving proficiency in system design and cloud deployment.
- Handled the deployment of in-house products on AWS and implementation of CI/CD pipelines to automate deployment processes and reduce release time by 40%.
- Migrated Inhabitr's monolithic Flask application deployed on EC2 to a FastAPI-based microservices architecture on AWS ECS, and published an IEEE paper based on the work.

Projects

SentinelAI | *Python, Flask, React, Docker, CNN, AWS EC2*

- Built a full-stack video anomaly detection and narration platform to automatically identify and generate text descriptions of anomalous events from uploaded videos.
- Created a custom autoencoder model and LSTM using Convolutional Neural Networks (CNN) and performed hyperparameter tuning to optimize model performance.
- Conducted comparative analysis between Autoencoder (unsupervised) and LSTM (supervised) models to determine optimal approach for video anomaly detection use case.

Log Advisor | *Python, Shell Scripting, MongoDB, PostgreSQL, GPT, Gemini*

- Developed an intelligent log analysis system utilizing supervised and unsupervised machine learning models to detect anomalies across HDFS and Linux system logs, with automated narration explaining detected anomalies.
- Designed and implemented an ML pipeline combining Random Forest classifier, log clustering algorithms, and autoencoder-based models to classify and narrate anomalous log events accurately.

AssignEase | *Flutter, Node.js, Express.js, MongoDB, Google Play Store*

- Engineered an AI-powered academic support app connecting students with subject matter experts through a transparent auction-based bidding system for cost-effective assignment help.
- Implemented a LightGBM regression model to recommend optimal bids by analyzing expertise, task complexity, and completion time, ensuring quality and affordability.
- Deployed app on Google Play Store.

Technical Skills

Languages: Python, Java, C/C++, SQL (Postgres), JavaScript, HTML/CSS
Frameworks: FastAPI, Flask, Django, Google ADK
Developer Tools: Git, Docker, AWS, Bitbucket Pipeline, Alloy, Loki, Grafana, Prometheus, Qdrant
Libraries: React, Pandas, NumPy, Tensorflow, Celery, LiteLLM