L Ashwini Balachandran

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EDUCATION

Bachelor of Technology (Computer Sciences)   Jun 2019 – Jun 2024
School Of Engineering, Jawaharlal Nehru University 🔗   New Delhi, India

MS Management   Dec 2022 – Jun 2024
School Of Engineering 🔗   New Delhi, India

PROFESSIONAL EXPERIENCE

LLM Developer Intern   Jan 2024 – Jul 2024
UptoPoint Ltd.

- Developed and integrated RAG bots and Q&A agents using open-source LLMs (Ollama, Mistral, Mixtral, LiteLLM), boosting project efficiency.
- Built email tools with Phidata (IMAP, SMTP, GSMTP, POP3) and Groq, automating workflows.
- Engineered ClickUp API tools and PythonREPL for autonomous task execution.
- Built a client website with chatbot/voice bot (vapiAI) integration, utilizing Redis, FAISS, Qdrant, Docker, and Tailscale. Integrated LLMs for email, calendar, and other plugins using Python libraries.
- Proficient in Python, Docker, Tailscale, n8n, Flowise, and Phidata for project development and integration. Experience with computer vision tools Moondream, LLAVA, YOLO and SAM.

Python Developer Intern   Jan 2023 – Jul 2023
Third Origin LLC 🔗

- Contributed to technical software development, focusing on CRUD and REST APIs for InfluxDB, QuestDB, MySQL, CockroachDB, timeseriesDB, and Redis, with a focus on optimizing performance.
- Optimized data operations on 10,000+ entries using multithreading, Docker, CPU, time, and memory profiling tools to improve system performance.
- Implemented algorithmic-based asynchronous functions to trigger task list generation and file delivery to users. This feature was integral to the system's core functionality, requiring robustness and efficiency to avoid server overload or crashes.
- Tested, optimized libraries and website for improved data handling, documented code with Sphinx, and managed projects with Jira/Atlassian.
- Collaborated on Amazon Workspace, used Apache Guacamole, and demonstrated strong Linux command line skills in development.

SKILLS

Programming Languages — Python, C/C++, R, JavaScript

Databases & Data Management — PostgreSQL, MySQL, MongoDB, Redis, SQLite, InfluxDB, TimeSeriesDB, QuestDB, CockroachDB, Faiss, Qdrant

Development Frameworks & Libraries — Django, bootstrap, ReactJS, NodeJS, ExpressJS, YOLO, SAM, OpenCV

Data Science, Machine Learning & Computer Vision — Pandas, Matplotlib, PyTorch, TensorFlow, Excel, Hugging Face Transformers (MariamMT), Kaggle, OpenCV, YOLO, SAM

DevOps & Tools — Docker, AWS, Render, Nginx, Whitenoise, Gunicorn, Tailscale, Jira, n8n, Flowise, git, Postman, CI/CD pipelines

PROJECTS

Personal Portfolio Website 🔗

Bootstrap, Django, SQLite, render, docker, CI/CD,

- Created a responsive site with Django, Bootstrap, and SQLite. Deployed using Render and Docker, with CI/CD pipelines configured via YAML. Utilized Gunicorn and Whitenoise for performance optimization and handled client IPs accurately using HTTP_X_FORWARDED_FOR.

NativeFlow 🔗

Python, Transformers Library, MariamMT, Langdetect Library, LLM, time-related operations

- Developed a conversational translator application that empowers users to register, chat, and seamlessly translate messages to their native tongue.
- The application efficiently manages user profiles, translation history and includes automatic language detection ensuring an optimal user experience.

Shop Management System 🔗

Python, Tkinter

- Automated billing system reducing errors by 30% and improving efficiency by 25%.
- Also tracks sales effortlessly with user-friendly charts and profit metrics.

DetectiveDribble 🔗

Python, OpenCV, Computer Vision, Machine Learning, NumPy

- Real-time basketball tracking app using computer vision, improving sports analytics by 20% offering invaluable insights into player performance and game dynamics.

decorlyn 🔗

Flutter, Dart, ARCore, Firebase, OpenGL

- Android app that focuses on interior design, places select objects on live images captures through camera using AR technology.
- Decorlyn lets you explore personalized designs, enabling 15% financial savings and 40% time savings on design decisions, and contributes to sustainability by minimizing physical prototypes.

Kaggle : Titanic - Machine Learning from Disaster 🔗

R, Pandas, Matplotlib, scikit-learn, Support Vector Classifier, Random Forest, GridSearchCV

- A machine learning model with 89% accuracy that predicts which passengers survived the Titanic shipwreck.

ContactCentral 🔗

Express.js, MySQL

- Express.js application with CRUD API functions to manage contacts through a CRM API or a MySQL database.

CallPilot 🔗

Node.js, Express.js, Twilio API, ngrok

- This IVR project demonstrates using Twilio's API with Node.js to manage phone calls and SMS messages. It initiates a Twilio call, plays an audio file, collects keypad input, and sends a personalized SMS.

DeliDex 🔗

Node.js, Express.js, MongoDB

- A RESTful that provides endpoints for managing categories, subcategories, and items, which can be utilized for various applications such as e-commerce platforms.
- Supports CRUD operations, search functionality, and tax and discount calculations for e-commerce platforms.