Kandhan C

Backend Software Developer

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PROFESSIONAL SUMMARY

Python Backend Developer with 3+ years of experience building scalable applications and REST APIs using Python, Django, DRF, Flask, and FastAPI. Skilled in PostgreSQL, JWT/RBAC, and AWS, with experience in manufacturing automation, cloud integration, banking systems, and Generative AI (LLMs & RAG). Focused on developing reliable, secure, and efficient backend solutions that solve real-world business problems.

EXPERIENCE

Software Engineer

August 2023 - Present

Binary Accord | Chennai, India

KEY RESPONSIBILITIES

- Developed and maintained Python-based backend applications and REST APIs.
- Designed PostgreSQL database models and implemented efficient database operations using ORM.
- Integrated AWS cloud services and implemented JWT authentication and role-based authorization.
- Implemented business logic, API validation, exception handling and automation workflows.

KEY PROJECTS

1. Centralized Cloud Integration & Authorization System

- *Tech Stack: Python, FastAPI, PostgreSQL, SQLAlchemy, AWS, Boto3, JWT*
- Developed FastAPI REST APIs for centralized manufacturing data integration and synchronization across multiple assembly areas.
- Integrated AWS services using Boto3 and implemented JWT authentication and role-based authorization.

2. Manufacturing & Mobile Assembly Management System

- *Tech Stack: Python, Django, DRF, PostgreSQL, Django ORM*
- Developed APIs for component production, unique ID generation, scanning and component assignment. Implemented assembly validation, duplicate prevention and missing-component checks.
- Used database transactions to maintain data consistency.

3. Banking Document Processing & PDF Automation system

- *Tech Stack: Python, Regex, FPDF, File Processing*
- Replaced legacy Press Script processing with Python automation, implementing parsing and regex-based extraction across TXT, DAT, JSON, TIF and STR files, including banking and loan documents.
- Automated document formatting, data processing and PDF generation using FPDF and reusable Python scripts, reducing manual effort.

PERSONAL PROJECT

1. Smart Clinical Advisor – AI-Powered Clinical Recommendation Platform

- *Tech Stack: Python, FastAPI, PostgreSQL, React.js, JWT, LLMs, RAG, HyDE, FAISS*

2. AI Math Tutor – LLM-Powered Educational Assistant

- *Tech Stack: Python, FastAPI, Ollama, DeepSeek, LangChain, PostgreySQL, RAG, Prompt Engineering, CoT*

EDUCATION

Master of Computer Application (MCA) 2024

Dr.M.G.R Educational and Research Institute | 8.1 CGPA | Employed While Pursuing MCA

Bachelor of Science in Computer Science (BSC(CS)) 2022

J.H.A Agarsen College University of Madras | 8.3 CGPA

SKILLS

Python JavaScript PostgreSQL MySQL Django ORM SQLAlchemy Pydantic SQL serializer OOP Concepts Django Django REST Framework (DRF) FastAPI Flask RESTful APIs API Integration OAuth2 JWT Authentication Generative AI Retrieval-Augmented Generation (RAG) LLM Integration Prompt Engineering AWS (EC2, S3, RDS, IAM) Docker Git GitHub Database Design Pandas NumPy VS Code Postman Swagger UI Pytest Async/Await Middleware

CERTIFICATIONS

Python Programing - (GUVI) **Certificate Link - May 2023**

Django FrameWork - (GeeksforGeeks) **Certificate Link - Jan 2024**

MySQL Database - (Simplilearn) **Certificate Link - Jun 2024**

AWS cloud - (Great Learning) **Certificate Link - May 2026**

LANGUAGES

English (Fluent) Tamil (Native)