PYTHON (AI/ML) - SOFTWARE ENGINEER - 3 years Exp.

SYNOPSIS

- More than 3 years in Python, Flutter/AI/ML development, with a strong record in designing, developing, and deploying mobile applications and AI-ML driven solutions.
- Skilled in Python and Flutter development for both mobile and web platforms.
- Hands-on experience in application architecture, design principles, coding, debugging, deployment, and monitoring.
- Adept at implementing design patterns such as Factory Pattern to enable dynamic model switching across platforms like OpenAI, Anthropic, LLaMA, and Claude.
- Notable experience in **Object Detection and Replacement System** using FastAPI, HTMX and jinja2 templates where the live preview of the modern kitchen can be made .
- Solid understanding of REST APIs, offline storage, ML Kit, and AI tools, with recent expertise in LangChain, LangGraph, and various LLM models.
- Demonstrated ability in developing proof of concepts (POCs) showcasing AI/ML capabilities and integrations.
- Proficient in integrating Firebase and Google APIs.
- Strong communicator, adept at collaborating with stakeholders and teams.

TECHNICAL EXPERTISE

- **AI and Machine Learning:** Proficient in using LangChain, LangGraph, and LangSmith,experience with LLM models such as OpenAI, Hugging Face, and ChatAnthropy, developed multiple POCs integrating AI functionalities.
- Currently focused on machine learning projects, image segmentation using **YOLOv11**, and leveraging Azure AI models for impactful solutions and **time series forecasting** using **ARIMA** and **SARIMA** models and implementation of **prophet** in time series .
- **Tools:** Pycharm CE,Replite, Android Studio , VS Code, PostMan, Xcode, Firebase CLI, Sublime, Spider, **Cursor ai,** Langflow,Langgprah studio.
- **Language/Scripts:** Python, Dart, Java, html5,FastAPI,GRPC,Django.
- **Technologies/Skills:** Flutter, AR core,Flutter Web, Android (Java), Web Hosting with Firebase, ML kit with Firebase, Odoo (Beginner),LangChain,LangGraph,FastAPI,LangFlow,LangSmith,StreamLit,ChainLit,Yolo11,azure
- **DBMS:** MySQL, SQLite,Firebase,Postgres,MongoDB,SurrealDB
- **Third-party tools:** Git, GitLab, Figma, AI tools and Extensions
- **Operating Systems:** Windows ,Ubuntu, macOS

PROJECTS

Project Title	AI-Powered Personalization System
Technology	Python, OpenAI (LLMs), Pillow, Math, gRPC
Team Size	2
Role	Developer
Role Description	- Developed an AI-powered chatbot for guided product personalization. - Integrated **OpenAI** APIs for conversational customization workflows. Used **Pillow** to dynamically generate real-time product previews with user-applied text or logos. - Built a **gRPC-based backend** for fast, scalable communication between UI and rendering/quotation services. - Applied the **Math** library for real-time, rule-based price calculations. - Implemented automated proposal generation engine for generating branded PDF quotation decks.
Project Duration	2 months
Technical Description	**gRPC**: High-performance backend communication layer between modules for customization, pricing, and proposal generation. **Pillow**: Image processing for overlaying text/logos onto product mockups in real time. **OpenAI**: Used for conversational interface to guide users through the customization process. **Math Library**: Handles advanced pricing models and cost breakdown logic.
Company Involvement	Client Project

Project Title	DeepWork
Technology	Python, Django, Postgress
Team Size	4
Role	Developer

Project Title	DeepWork
Role Description	- Analyzed the existing Django-based monolithic system. - Refactored and modularized backend logic to serve as standalone REST APIs. - Developed robust APIs to support frontend migration to Next.js. - Ensured compatibility with PostgreSQL and optimized data querying. - Collaborated with frontend developers to align API responses with new UI requirements. - Performed integration testing and API documentation using Swagger/OpenAPI.
Project Duration	4 months
Technical Description	- The original system was fully built in Django with server-rendered templates. - Project scope involved decoupling frontend and backend, enabling API-driven architecture. - Built RESTful APIs using Django REST Framework. - APIs exposed business logic and data previously embedded in server-rendered views. - Integrated PostgreSQL as the primary relational database. - API endpoints were designed to support dynamic frontend behavior in **Next.js**. - Focus on reusability, scalability, and performance under high-load usage.
Company Involvement	Client Project

Project Title	PX-connect
Technology	Python, Dotnet, RabitMQ, GraphQL, Aspire, MongoDB
Team Size	12
Role	Developer
Role Description	- Research and integration of MongoDB with API calling. - Flat structured using pandas and other python lib. - Messaging Queue manages multi-platform using RabitMQ.
Project Duration	6 months

Project Title	PX-connect
Technical Description	- Flat structure from the RESTAPI,CSV,EXCLE,SOAP-API - data ware house into mongo collections - Manage RabitMQ queuing process with communication with Blazor and other aspire projects - handling pandas and data frame and manipulating json into flat structure of the response
Company Involvement	BiztechProduct

Project Title	AI Pharmacy Chatbot
Technology	AI, Python, SurrealDB, LangChain (GraphQAChain), FastAPI, HTML5
Team Size	1
Role	Developer
Role Description	- Researched and integrated advanced LLM-based question-answering over graph databases using LangChain's GraphQAChain. - Designed and implemented a healthcare-focused chatbot for safe drug recommendation. - Built dynamic symptom matching logic using embeddings and fuzzy matching. Implemented SurrealQL query generation and execution based on natural language input. - Designed safety filtering layers for drug contraindications based on patient profile. - Developed explainable drug output modules and conversational UI.
Project Duration	2 months
Technical Description	**LangChain QAChain**: For natural language to SurrealQL translation and execution. **SurrealDB**: Graph database for storing symptom-drug-condition relationships. **FastAPI**: Backend API framework. **Safety Filtering Engine**: Custom logic for handling age, gender, allergies, and pregnancy-related constraints. **Embeddings & Fuzzy Matching**: For dynamic symptom

Project Title	AI Pharmacy Chatbot
	recognition. ● **HTML5 UI**: Simple interface for chatbot interaction and drug recommendations.
Company Involvement	Client Project

Project Title	Object Detection and Replacement System
Technology	AI, Python, FastAPI, StreamLit, YOLOv11, OpenCV, JSON, PostgreSQL, Roboflow, SAM
Team Size	1
Role	Developer
Role Description	● R&D on advanced object detection and segmentation using YOLOv11,SAM. ● Analysis and integration of object detection models for dynamic variant replacement with labelling in roboflow. ● Project planning, architecture design, estimation, and implementation of backend and UI. ● Developing APIs and UI for instance-specific object modification and replacements.
Project Duration	3 months
Technical Description	YOLOv11 for Object Detection,FastAPI Integration,Dynamic Instance Replacement,JSON-Structured Outputs,HTML5 UI,SAM for Segmentation
Company Involvement	Client Project

Project Title	Time Series Analysis
Technology	ML, Python, FastAPI
Team Size	1
Role	Developer

Project Title	Time Series Analysis
Role Description	- R&D on advanced ARIMA and SARIMA and Prophet. - Analysis and integration of dynamic features understanding. - Project planning, architecture design, estimation, and implementation of backend. - Developing APIs and UI for instance-specific object modification and replacements.
Project Duration	2 months
Technical Description	Finding Best P,D,Q value for the ARIMA and SARIMA ,feature engineering, time series data, data cleaning , data analysis, prophet
Company Involvement	Client Project

Project Title	Model Agnostic Chatbot
Technology	AI, Python, FastAPI, StreamLit, ChainLit, Postgres
Team Size	1
Role	Developer
Role Description	R&D, Analysis, Project Planning, Estimation, Development
Project Duration	1 months
Technical Description	postgres Database,StreamLit,graph UI,langGraph,query generation,fastAPI, **text-to-query-text/graph**
Company Involvement	Biztech Product

Project Title	PDF RAG app
Technology	AI, Python, FastAPI, chromaDB
Team Size	1
Role	Developer
Role Description	R&D,Analysis,Project Planning, Estimation, Development

Project Title	PDF RAG app
Project Duration	1 week
Technical Description	authentication, FastAPI,RAG,Embeddings ,retrieval, no hallucination , embedded Flow
Company Involvement	Biztech Product

Project Title	CF-Booking ChatBot
Technology	AI, Python, ChainLit, Sqlite
Team Size	4
Role	Developer
Role Description	R&D,Analysis,Project Planning, Estimation, Development,Manager
Project Duration	1 months
Technical Description	Chainlit UI,Python-Flow, LangGraph with Agent work, interactive bot,All DML functions,thread maintaining, conversation memory
Company Involvement	Biztech Product

Project Title	DeskXpand
Technology	Flutter
Team Size	6
Role	Developer
Role Description	R&D,Analysis,Project Planning, Estimation, Development
Project Duration	2 months

Project Title	DeskXpand
Technical Description	Web API CRUD,UI Complexity,Login/LogOut Flow with Token management,Dynamic data flow, html text editor,Plugin Customization,File Operations,Third party Packages/Library,Multi - Language ,Git Flow,Asyns programming,Dynamic UI
Company Involvement	Biztech Product

Project Title	MappyField365
Technology	Flutter
Team Size	3
Role	Developer
Role Description	Project Planning, Estimation, Development
Project Duration	2.5 months
Technical Description	Firebase Firestore,Web API CRUD operations, UI Complexity, Live Chatting, File Sharing,Location Tracking,App Life Cycle Manage, Background service(Notification),Third Party Package/Library Integration,Push Notification,Cloud Messaging,Firestore structure manage,Microsoft Login,Web to Mobile Flow
Project Type	Biztech Product

Project Title	Style
Technology	Flutter
Team Size	4
Role	Developer
Role Description	Estimation, Development
Project Duration	4 months
Technical Description	Web API CRUD operations, UI Complexity,Flow optimization,Crash analytics,Multi Language Support,Push Notification
Project Type	Biztech Product

Project Title	**Magemob Admin and Inventory**
Technology	Flutter
Team Size	4
Role	Developer
Role Description	Estimation, Development
Project Duration	4 months
Technical Description	Web API CRUD operations, UI Complexity,Flow optimization,Multi Language Support,Push Notification
Project Type	Biztech Product