

EXPERIENCE

•Openmg

June 2025 - Present

Full Stack Developer

Remote

- Built RESTful APIs with FastAPI for patient, doctor, and appointment management.
- Managed schemas using Pydantic + SQLAlchemy to ensure data integrity.
- Implemented secure authentication and role-based access control.
- Optimized performance with async APIs and modular design for scalability.

•Linked Matrix

August 2023 - June 2025

Associate Software Engineer

Onsite

- Developed an automated educational workflow platform using **Django** and **GraphQL**, replacing manual CSV processes.
- Built financial management and hospital inventory systems with **Django** and **Anvil** for efficient operations.
- Implemented RESTful APIs with **FastAPI** and designed reusable Python packages to support internal tools and bot development.
- Created responsive frontend applications using **React.js** and cross-platform mobile apps with **React Native**.
- Integrated AI functionalities and bot clients leveraging **LiteLLM** for conversational AI and automation workflows.
- Developed CI/CD pipelines using **GitHub Actions** to automate deployment to Google Cloud Platform (GCP).
- Built trucking inventory management system with integrated **PayPal** payments and **Twilio** notifications to streamline logistics.

TECHNICAL SKILLS AND INTERESTS

Languages/Technologies: Python, JavaScript (ES6+), TypeScript, GraphQL, HTML5, CSS3, C#, SQL

Frameworks/Libraries: React, React Native, Next.js, FastAPI, Django (DRF), Flask, Celery, Strawberry GraphQL, Anvil, .NET Core

Databases: MySQL, PostgreSQL, MongoDB, Redis

Cloud Platforms: Google Cloud Platform (GCP), Amazon Web Services (AWS), DigitalOcean

DevOps and Tools: Git, GitHub Actions, Docker, Docker Compose, Kubernetes, Terraform, CI/CD pipelines

AI and Bot Development: Bot development frameworks, Chat Completion APIs (OpenAI, Cohere, etc.), **litellm** for lightweight local LLM inference

Payments: Stripe, PayPal integration and APIs

Other: RESTful API design, OAuth2/JWT authentication, Microservices architecture, Agile methodologies, Test-driven development (TDD)

PROJECTS

•Secure RX – Comprehensive Hospital Management System

React (Frontend) / FastAPI (Backend) / PostgreSQL / SQLAlchemy / JWT Authentication

- Built a **role-based healthcare management platform** for patients, doctors, and administrators to manage **appointments, medical records, and real-time dashboards**.
- Developed **secure RESTful APIs** with FastAPI for **authentication, appointment scheduling, and automated notifications** using **JWT-based access control**.
- Designed and integrated a **responsive React frontend** enabling **seamless user experience** and **real-time interaction** across roles.
- Implemented **robust data validation and integrity** using **Pydantic models** and **SQLAlchemy ORM**, backed by **PostgreSQL** for reliable data persistence.

•AI-Enhanced Pharmacy Management System

React (Frontend) / Django REST Framework (Backend) / TensorFlow / OCR

- Implemented **OCR-based barcode and batch number recognition** to **digitize stock records**, reducing **manual errors** through **automated data entry**.
- Built **interactive React dashboards** for **real-time sales and inventory analytics**, powered by **Django REST APIs**.
- Integrated **role-based authentication** and an **alert system** for pharmacists and managers, providing **real-time updates** on **low stock** and **expired medicines**.

•Property Management System

Multi-App Architecture / Google Cloud Platform (App Engine, Cloud Tasks) / PostgreSQL

- Maintained and scaled **multiple microservices** deployed on **Google Cloud Platform (GCP)** using **App Engine** and **Cloud Tasks** for **asynchronous processing** and improved scalability.
- Implemented **tenant management features** including **lease tracking** and **maintenance requests** with automated updates.
- Optimized **database queries** and **indexing** to enhance **system performance** and **user experience**.

•AI Bot Development

Python Clients / React Native Frontend / AWS Lambda

- Created **chat wrapper clients** for multiple AI providers (**OpenAI**), standardizing **chat completion endpoints** with **robust error handling**.
- Developed **React Native mobile and web applications** providing **interactive chat interfaces** with **multimedia support**.
- Deployed **backend serverless functions** on **AWS Lambda** for **scalable** and **cost-efficient** processing of chat logic.
- Packaged a **Python SDK** to assist developers in building **custom chat bots** with **minimal code** and **flexible configurations**.

•Strawberry GraphQL App

Strawberry GraphQL / CSV Data Ingestion / Backend Validation

- Designed and developed a **robust backend system** using **Strawberry GraphQL** to **ingest, validate, and process large volumes of school data** from **CSV uploads**.
- Implemented **complex mutation logic** to handle **nested data structures** for **student reviews, programs, feedback, and scheduling**.
- Ensured **data consistency** and **error reporting** with **custom validation rules** and **batch processing strategies**.

•Anvil Apps

Anvil Low-Code Platform / AI Integration / Full-Stack Development / SQL Optimization

- Built **end-to-end web applications** using **Anvil's low-code platform**, integrating **AI models** for **predictive analytics** and **natural language processing tasks**.
- Optimized **SQL database queries** to improve **responsiveness** and reduce **latency** for **data-heavy applications**.

•RideFlow – Intelligent Transportation Booking System

Next.js (Frontend) / Django REST Framework (Backend) / Docker / DigitalOcean Kubernetes

- Engineered a **multi-role transportation platform** enabling passengers to **book rides, chat with drivers, and track vehicles in real time**.
- Integrated **PayPal REST API** for **secure payments** and **automated refund workflows**, improving **transaction reliability**.
- Containerized and **deployed services via Docker and Kubernetes**, ensuring consistent **CI/CD pipelines** across **staging and production** on **DigitalOcean**.

EDUCATION

•Bachelor of Science in Computer Science

Punjab University College of Information Technology (PUCIT), University of the Punjab

LANGUAGES

- English (Fluent)
- Urdu (Native)
- Punjabi (Intermediate)

REFERENCES

References will be provided upon request.