

Muhammad Bahjat

AI/ML Engineer • Team Lead | Lahore | +923354615591 | syedmbahjat848@gmail.com | <https://www.linkedin.com/in/muhammadbahjat/> | <https://github.com/SyedBahjat>

Professional Summary

AI/ML Engineer with 2+ years of experience in Python, backend development, and cloud-native AI/ML systems. Skilled in building production-ready LLM and RAG pipelines, designing agentic workflows (LangChain, HuggingFace, Vertex AI), and deploying scalable applications on Kubernetes (GCP, AWS). Recognized for a strong **ownership mindset** and **leadership** as a Team Lead, driving end-to-end delivery of AI-driven automation, NLP solutions, and data pipelines that improve client communication and business outcomes.

Key Skills

Languages/Frameworks: Python, Django REST Framework, FastAPI, Flask, JavaScript, React, Node.js, SQL, PostgreSQL, MongoDB
AI/ML: LangChain, LLMs, Retrieval-Augmented Generation (RAG), Prompt Engineering, HuggingFace, PyTorch, TensorFlow, Vertex AI, Vector Databases (FAISS, Pinecone), Whisper, NLP, Deep Learning

MLOps/Cloud: Kubernetes (GKE, EKS), Docker, GCP (GKE, Cloud Run, Vertex AI), AWS (EC2, S3, GCU), CI/CD (GitHub Actions), Redis, Celery, Model Deployment, Cloud Infrastructure

Data/Automation: REST APIs, Async I/O, Webhooks, Selenium, Playwright, Browser Automation, ETL Pipelines, Data Processing, Twilio API, WhatsApp API, Email Automation, Chatbot Development.

Tooling: Git, Pandas, NumPy, Streamlit, CLI Tools

WORK EXPERIENCE

AI Engineer

HomeEasy, Chicago, USA

May 2024 – Present

Tech: Python, FastAPI, LangChain, PostgreSQL, Kubernetes, GCP, AWS, Redis, Celery, Selenium, Playwright, Retell/Bland

- Spearheaded development of a **multi-agent orchestration system**, automating lead qualification and client interactions, improved processing efficiency by **35%**.
- Built and deployed a voice agent with Retell & Bland AI, handling 1,000+ calls/day, and integrated outputs into PostgreSQL for tracking commission-eligible properties.
- Automated **real estate inventory discovery** with Selenium/Playwright and browser agents, filtered commission-approved listings before delivery to clients.
- Solved headless scraping limitations by integrating **Docker VNC**, enabling GUI simulation and improving scraping success on restricted sites.
- Deployed production workloads on **GCP Kubernetes and Cloud Run**, scaling high-volume AI services with zero downtime.
- Led vendor negotiations with GCP and supervised a small engineering team, contributing to **new revenue streams** and enhancing team productivity.

Python Developer

Groomify, Lahore, Pakistan

Jan 2024 – May 2024

Tech: Python, Django REST Framework, PostgreSQL, APIs

- Developed multiple REST APIs for a behavioral incentive platform, improving system scalability and performance.
- Collaborated with other departments (Frontend, UI/UX).
- Designed and optimized database models, reduced query response times by **25%**.
- Integrated third-party APIs and authentication mechanisms, ensuring secure and reliable access for users.

Intern Software Developer

ChatDroid, Lahore, Pakistan

June 2023 – Dec 2023

Tech: LangChain, OpenAI, Streamlit, Faiss, Whisper, JavaScript/jQuery

- Built **conversational AI chatbots** using LangChain + OpenAI, enabled automated sales and customer support.
- Enhanced frontend UX with JavaScript and jQuery, ensuring smooth interaction.
- Applied Python libraries (Faiss, Pandas, Whisper) to strengthen chatbot intelligence and personalization.

PROJECTS

AI Personal Assistant (WhatsApp & Email Integration) | Python, Twilio, LangChain, OpenAI, Gmail API

- Built an AI assistant that connected to WhatsApp via Twilio API, providing real-time conversational replies.
- Automated workflows such as **email sending, meeting scheduling, and file parsing/summarization**, acting as a personal productivity agent.
- Increased response efficiency by **40%** by enabling AI-driven WhatsApp replies and automating email scheduling tasks

AI-Driven Calling System with Web Scraping | Retell AI, Bland, Selenium, Docker (VNC)

- Automated outbound/inbound client communication handled **1,000+ daily calls** with real-time requirement collection.
- Overcame headless scraping issues by deploying **Docker VNC GUI simulation**, enabling full automation.

Smart Waiter Robot (Final Year Project) | Raspberry Pi, LiDAR, SLAM

- Designed an autonomous waiter robot that mapped restaurants and delivered food from orders placed via a web app.

ChatDroid – AI Sales & Support Bot | LangChain, OpenAI, Streamlit

- Developed chatbot with a personalized dashboard, improved response accuracy and reduced manual support load.

Arduino Retro Gaming OS | Arduino, C, TFT Screen

- Created a lightweight OS with playable retro games, blending embedded systems and gaming.

EDUCATION

Comsats University Islamabad

Bachelor of Science in Computer Engineering

Lahore, Punjab, PAK

AUG 2020 – JUNE 2024

Leadership & Extracurricular

- Team Lead, AI Engineering — mentoring junior developers and managing project deliverables.
- Executive Member, IEEE RAS | Apr 2023 – Jan 2024
- Event Coordinator, University Sports Club