

# Asad Rahim

Full Stack Development | Backend Engineering | Cloud & DevOps | AI | LLM & RAG Systems

**Full Stack Python & AI Developer** experienced in building scalable backend systems and advanced AI solutions. Expert in Python, Flask, FastAPI, and cloud platforms (AWS, GCP). Skilled in database optimization (DynamoDB, Postgres, Snowflake), data pipelines, and API design. Focused on AI/ML orchestration with RAG architectures, LLM integration (LangChain, OpenAI, Claude), and MCP server design. Proven leader in system migrations, performance tuning, and deploying AI-driven solutions with Docker/Kubernetes. Passionate about leveraging cloud and generative AI to deliver robust, scalable software.

## EXPERIENCE

### Advanced RAG Architectures - AI Engineer

Built Vector RAG systems using dense retrieval (e.g., Pinecone) and hybrid search strategies to optimize context relevance for LLMs.

Designed Graph RAG solutions leveraging knowledge graphs (Neo4j, AWS Neptune) to enhance LLM reasoning with structured, interconnected data.

Integrated multi-modal embeddings (CLIP, OpenAI) for hybrid text/image retrieval in RAG pipelines.

### MCP Server & LLM Orchestration: - AI Engineer

Developed a Multi-Model Communication Protocol (MCP) server to route queries dynamically between LLMs (GPT-3, GPT-4, Claude, LangChain) based on latency, cost, and task type.

Added custom tooling for prompt chaining, LLM benchmarking, and audit logging.

Deployment: Containerized services (Docker/K8s) on AWS/GCP with autoscaling and monitoring (Grafana, Prometheus).

### Pivony, Full Stack Backend Engineer

Worked remotely as a backend engineer for a US-based company, focusing on API service migration, Data Pipeline design updates, and optimization. Led the migration of the entire API service to a new design using Python and AWS DynamoDB, significantly improving scalability and reliability. Developed and maintained data pipelines using AWS EC2, AWS Glue, and core Python with Pandas, enhancing data processing and analysis capabilities. Optimized Flask API endpoints with Postgres, resulting in improved performance and reduced response times for complex queries. Collaborated with cross-functional teams to ensure seamless integration of backend services with frontend applications, enhancing the overall user experience. Implemented best practices for code quality, version control, and deployment, leading to more efficient development cycles and streamlined releases.

[Recommendation Letter](#)

### Linked Matrix International, Team Lead & Full Stack Developer - Remote

Implemented dynamic and interactive interfaces using Vue.js and React. Collaborated closely with designers, product managers, and quality assurance professionals to deliver high-quality code within Agile environments. Demonstrated expertise in database design, optimization, and query performance with databases like MySQL, PostgreSQL, MongoDB, and Snowflake.

Applied cloud computing knowledge in AWS and GCP to design and deploy scalable solutions.

Utilized AWS services such as EC2, S3, Lambda, and RDS to develop cloud-based applications.

Worked with Snowflake database and used dbt for data transformation and modeling.

Leveraged Databricks for big data processing and analysis.

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Github: <https://github.com/AsadRahim>

## SKILLS

Core Python, Javascript Frameworks, and DevOps

**AI/ML:** RAG (Vector/Graph), LangChain, LLM Orchestration, Knowledge Graphs (Neo4j), Prompt Engineering, websockets, SSE

**Web App:** Python Django, Flask, FastAPI, FastMCP, Websockets, SSE, ReactJs, NextJs, and VueJs

**Databases:** SQL and No-SQL databases like Postgres, MongoDB, Mysql, Redis, DynamoDB, Neo4j,

**Cloud Platforms:** AWS, GCP and Cloud Functions, AWS Glue

**Data Warehouses:** Bigquery and Snowflake, Databricks

**DevOps CI/CD:** Github actions, GitLab CI/CD, Bitbucket pipelines, Ansible

**DevOps deployments:** Containerization, Celery, Kubernetes, Grafana, Kafka, ArgoCD, GitOps

**Data Science Tools:** Databricks, Dbt, Fivetans, Google Colab, Jupyter Notebook, AWS Glue, RAY

## LANGUAGES

English

Actively participated in the entire software development lifecycle, from project conceptualization to deployment.  
Stayed updated with the latest technologies and tools, continuously learning and applying new advancements in software development.

**Orange Lynx IT, Associate Software Engineer - Remote**

Our team was working on a Social Media app named ‘Yakbun’. I worked as a full stack developer here for frontend we used VueJs and for backend php Laravel.

**EDUCATION**

**University of Engineering and Technology — Computer Science, Bachelor of Science**

September 2016 - September 2020

CGPA - 3.48/4.00