

MD SAMIUL ISLAM

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Experiences

Software Development Engineer 2	IQVIA (Fortune 500 Company)	Dhaka, Bangladesh	10/2023 - Present
<ul style="list-style-type: none">Developing an Agentic AI system in Python using LangGraph, powered by LLMs and knowledge graph algorithms for structured reasoning and decision-making.Developed a distributed summarization workflow to process massive datasets (10,000+ rows) in parallel, overcoming LLM token window limitations and facilitating structured decision-making within a LangGraph agent.Refactored a highly resilient, distributed ETL workflow in Python using FastAPI and Celery. Engineered the data ingestion layer to process millions of events at a massive scale, employing a distributed jitter strategy to mitigate the thundering herd problem and maximize processing efficiency.Optimized performance with database partitioning and sharding, delivering scalable solutions for increased workloads.			
Software Engineer			
Brain Station 23 Dhaka, Bangladesh 01/2021 - 10/2023			

Software Engineer	Brain Station 23	Dhaka, Bangladesh	01/2021 - 10/2023
<ul style="list-style-type: none">Led the design and development of enterprise-level microservice applications utilizing cutting-edge technologies such as Go, MongoDB, Redis, PostgreSQL, Elasticsearch. Realized a 15% cost reduction through effective caching implementation and concurrency.Designed and implemented scalable APIs and background workers for ETL tasks using Python, Django, AWS, Celery, and Elasticsearch, processing millions of license requests daily. Achieved a notable 20% performance optimization through crafted DB queries.Led end-to-end development of various products, encompassing system requirement identification, partner dependency management, workload balancing, software implementation, engineering, testing, and configuration of metrics, alarms, monitors, and dashboards.			

Skills

- Python | Django | FastAPI | LangGraph | Golang | Gin
- PostgreSQL | Snowflake | Elasticsearch | MongoDB | Redis | RabbitMQ | SQLite
- Docker | Celery | AWS Bedrock | AWS SageMaker | Serverless | Grafana | Git | CI/CD | Unit Testing
- Microservices | Distributed Systems | ETL | Backend | Data Engineer | Problem Solving | Leadership

Education

Bachelor of Science	BRAC University	Dhaka, Bangladesh	01/2017 - 06/2021
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- Major in Computer Science

Projects

- AI Assistant (Python, Langgraph, FastAPI, Langsmith, LLMs):** Architected and deployed a cutting-edge Agentic AI system leveraging LangGraph for autonomous decision-making and natural language to SQL generation. The system, built on a scalable FastAPI and Kubernetes microservices architecture, features robust data validation, intelligent tool calling, and comprehensive observability with Langsmith.
- Distributed URL Shortening Service (Python, Django, PostgreSQL, Hashing Algorithms, JavaScript):** Engineered a high-availability URL shortening service to handle millions of requests with low latency. Built a scalable URL generation system using a transactional counter-range allocation method to ensure efficient, concurrent URL creation. Optimized service performance with a multi-tier caching system and implemented user authentication for secure URL creation and management, while maintaining strong data consistency.
- Product Compliance Monitoring Software(Django-rest-framework, PostgreSQL, Elasticsearch, Amazon Open Search, Celery, Amazon Simple Queue Service, React):** Developed a Django-rest-framework backend and React frontend, empowering 360-degree monitoring of global health, safety, and environmental regulations for diverse products. Utilized Elasticsearch for robust full-text search capabilities and PostgreSQL as the primary database. Implemented a sophisticated system for enhanced regulatory compliance.

Leadership & Mentorship

- Received **Silver** recognition from IQVIA for demonstrating strong leadership by ensuring high-quality deliverables and actively mentoring junior team members.
- Served as an IT Instructor (05/2022-10/2023), providing in-depth training in Python and Django to equip individuals with industry-ready skills.

Achievements

- Secured **Champion** title at the BRACU Intra University Programming Contest in 2017 and 2018.
- Attained the 5th position nationwide in the IEEE Xtreme 13.0 competition (2019).
- Twice recognized on the Vice Chancellor's List for achieving a perfect 4.00 CGPA.