

MD SAMIUL ISLAM

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Experiences

Software Development Engineer I [IQVIA \(Fortune 500 Company\)](#) *Dhaka, Bangladesh* **10/2023 - Present**

- Building AI-driven autonomous systems, utilizing graph-based methodologies and structured context protocols to enhance decision-making and adaptability.
- Engineered a scalable data processing pipeline, optimizing ingestion, transformation, and orchestration for efficient high-volume workflows.

Software Engineer [Brain Station 23](#) *Dhaka, Bangladesh* **01/2021 - 10/2023**

- 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.
- Enhanced system metrics through seamless telemetry integration; proficiently identified, prioritized, and executed tasks throughout the software development lifecycle.
- Orchestrated the integration of Continuous Integration/Deployment Pipelines, diligently managing pull requests, and conducting thorough code reviews, and executing comprehensive **load/stress** and **unit/integration** testing.

Skills

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

Education

Bachelor of Science [BRAC University](#) *Dhaka, Bangladesh* **01/2017 - 06/2021**

- Major in Computer Science

Projects

- **GenAI SMS & WhatsApp Messaging Platform**(Python, FastAPI, Twilio, PostgreSQL, Perplexity AI): Architected and implemented a highly scalable and fault-tolerant communication platform, integrating Twilio for SMS and WhatsApp messaging. Leveraged Perplexity AI and advanced prompt engineering techniques to generate context-aware, intelligent responses, enhancing user engagement. Designed and optimized an AI-driven messaging workflow with automated scheduling, a robust PostgreSQL-based logging infrastructure, and comprehensive API monitoring to ensure high availability, reliability, and efficient group message management.
- **URL Shortener Web App**(Python, Django, PostgreSQL, Hashing Algorithms, JavaScript): Took an active role in the implementation of a distributed TinyURL service, overseeing unique short URL generation, efficient mapping retrieval, and user account-based access. Ensured robust system reliability and data integrity through proficient distributed system design.
- **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.

Mentorship

- **IT Instructor(05/2022-10/2023)**: Provided in-depth training in Python and Django, equipping individuals with industry ready skills for the competitive job market.

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).
- Achieved the 8th position at the UITS Inter-University Programming Contest in 2019.
- Twice recognized on the Vice Chancellor's List for achieving a perfect 4.00 CGPA.