Shaswata Das

Dhaka, Bangladesh · +880-1748-479050 · shaswata56@gmail.com

linkedin.com/in/shaswata56 · github.com/shaswata56 · shaswata.me

TECHNICAL SKILLS

Languages & Frameworks: C# (.NET Framework 4.5+ / .NET 8/9), Python, Go (Golang), TypeScript, Angular.
Backend Systems: Microservices (CQRS), Event-Driven Architecture, REST/gRPC APIs, System Design, Redis.
Security & Identity: OAuth 2.0, SAML SSO, OpenID Connect, RFC 6238 (TOTP), OWASP Mitigation, CSP.
AI & Infrastructure: LangChain, RAG, Vector DBs, Azure, AWS, Docker, Kubernetes, CI/CD Pipelines.

PROFESSIONAL EXPERIENCE

Software Engineer **Orbitax Bangladesh Limited** | *Mar 2024 – Present*

- **Database Modernization (Entity Framework to MongoDB):** Led the migration of the core Identity database from SQL Server with **Entity Framework** to **MongoDB**, refactoring complex stored procedures into application-layer logic. Established a schema-less architecture that eliminated rigid relational constraints, accelerating Agile feature development cycles by 40%.
- **Data Backup & Cost Optimization:** Developed internal backup and restoration features for database, S3, and persistent storage using automated workflows, reducing infrastructure costs for inactive workspaces by 35%.
- **Cross-Platform Microservices (Python CQRS):** Engineered a **CQRS-based microservice in Python** with full protocol compatibility with existing .NET systems. Built a custom Python library to bridge **SignalR** real-time messaging with **RabbitMQ** backplane, enabling bidirectional communication between Python and .NET services. Integrated shared database models and **Redis** for distributed caching, establishing a seamless polyglot architecture within the enterprise ecosystem.
- **Security Hardening (CSP):** Implemented strict Content Security Policy (CSP) headers across the Identity platform, mitigating XSS/Injection attacks. Redesigned the permission management system to enforce granular **RBAC** scopes.
- **System Reliability:** Resolved critical stability bugs in the AdminPanel and Identity applications. Mentored junior associates on secure architecture patterns, facilitating knowledge transfer and code quality improvements.
- **AI Agent Engineering (XatBot):** Architected the backend for "XatBot," an intelligent tax assistant using **LLMs** and **RAG**. Developed usage reporting modules to analyze agent performance and user engagement metrics. *(Stack: C#, Python, OpenAI API, SQL)*

Associate Software Engineer **Orbitax Bangladesh Limited** | *Mar 2022 – Feb 2024*

- **Enterprise Security & Audit Defense:** Remedied critical SAML SSO misconfigurations identified by a **Big 4 auditing firm**. Assumed full ownership of the legacy Identity Provider software, ensuring compliance for enterprise clients.
- **Authentication Architecture:** Stabilized the "MagicLink" passwordless login system using robust design patterns (Singleton/Factory). Implemented **RFC 6238 TOTP** Multi-Factor Authentication (MFA), raising the security baseline.
- **Infrastructure Security:** Decoupled the internal Administrative Application onto an isolated domain, reducing the public attack surface. Designed secure token validation scopes for external access.
- **Feature Engineering (ITP Platform):** Engineered the "Net Operating Loss" calculation module and a star-based rating system for the Desktop client using **Angular** and **C# (.NET)**, directly impacting user retention.

Software Engineer Intern (Converted to Full Time) Orbitax Bangladesh Limited | *Sep 2021 – Feb 2022*

- **Performance Engineering (Go Port):** Ported a high-throughput .NET microservice to **Go (Golang)** for R&D benchmarking, achieving a **60% reduction in latency** and **70% reduction in memory usage**.
- **Internal Tools (EAT):** Developed the "Open Data Extractor Web" node for the Executable Actions Tool (EAT), enabling automated data parsing workflows. Fixed critical bugs in the collaborative workflow engine.
- **QA Automation:** Created batch scripting infrastructure allowing QA teams to trigger automated **JMeter** load tests, streamlining the release validation cycle.

PROJECTS & RESEARCH CONTRIBUTIONS

Cirq (Google Quantum AI) – Contributor *2024*

- Clarified documentation and parameterization of `CZPowGate`, merged into the main repository. **PR Link**

microOS (Systems Engineering) *GitHub*

- Minimal OS with loader, bootstrap, IDT, and kernel. Runs on QEMU/bare metal; demonstrates systems engineering fundamentals. **Link**

XatBot (Orbitax) *Production*

- AI-powered tax assistant grounded in 70k+ legal documents; integrates retrieval-augmented generation for domain-specific accuracy. **Link**

EDUCATION

Bachelor of Science in Computer Science and Engineering *Feb 2023*
Shahjalal University of Science & Technology Sylhet, Bangladesh