AHANAF MOKAMMEL OMI

Full-Stack Developer

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Summary

A Full-Stack Developer fascinated by the space where imagination meets engineering. I enjoy turning ideas into thoughtful applications and shaping the architecture that brings them to life. With experience in ASP.NET Core, C#, SQL Server, PostgreSQL, Redis, HTML5, CSS3 and JavaScript, I strive to build software that is elegant in design, resilient in architecture, and meaningful in purpose.

Professional Experience

Full-Stack Developer | Billing Master Software Ltd. | Dhaka-1205, Bangladesh **October 2025 – Present**

Developed and maintained more than three ASP.NET MVC modules, improving internal business processing efficiency by 30%, implementing scalable CRUD operations and database functionalities, reducing user-reported errors by 25%, and optimizing SQL queries, achieving 20% faster data retrieval.

Executive Member | BRAC University Computer Club | Dhaka-1212, Bangladesh **June 2022 – December 2025**

Supported website management and coordinated coding competitions for the club.

Projects

NEXUS – Supply Chain Intelligence Command Center | *ASP.NET Core MVC, C#, PostgreSQL, Redis, EF Core, Docker* GitHub
- Engineered a supply-chain decision-support platform modeling dependencies as graphs: BFS/DFS, alternate paths, SPOF/bottleneck detection, impact propagation.
- Built deterministic disruption simulation (stockout-day, service-level, revenue-at-risk, what-if), AI orchestration, RBAC, audit logging, SignalR, Testcontainers.

VERITAS – Enterprise Identity & Access Governance Platform | *ASP.NET Core, C#, PostgreSQL, Redis, EF Core, Identity* GitHub
- Built a zero-trust IAM platform: RBAC, ABAC, deny-by-default ALLOW/DENY/APPROVAL evaluation, immutable policy versions, risk scoring.
- Implemented risk-aware MFA (IP, login failure, after-hours, device-trust signals), JIT access, access reviews, API-key hashing/rotation, HMAC-SHA256 webhooks.

NEURA – Neural AI Agent Orchestration & Continuity Platform | *ASP.NET Core, C#, PostgreSQL, Redis, SignalR, OpenAI, Anthropic, Google AI* GitHub
- Developed a multi-agent platform maintaining task continuity across AI providers via ContextHandoffPackage, validation, automatic handoff, weighted routing.
- Added memory, knowledge graphs, AI adapters, retry/backoff, circuit breakers, rate limiting, encrypted credentials, cost tracking, SignalR/Cytoscape visualization.

FORGE – AI Software Engineering Intelligence Platform | *ASP.NET Core, C#, Roslyn, PostgreSQL, EF Core, Git* GitHub
- Engineered an intelligence pipeline combining Roslyn semantic analysis, repository indexing, C# symbol extraction, dependency graphs, and Git-history mining.
- Implemented deterministic risk scoring, security-pattern and technical-debt analysis, architecture policies, multi-tenant authZ, audit logging, rate limiting.

PULSE – Distributed Job Processing & Workflow Platform | *ASP.NET Core MVC, C#, RabbitMQ, Redis, SQL Server, EF Core* GitHub
- Engineered a distributed job-processing modular monolith: RabbitMQ priority queues, manual acks, dead-letter queues, Redis locks, idempotency.
- Implemented job lifecycle management, retries with exponential backoff, cancellation, scheduled jobs, worker orchestration, queue monitoring, failure simulation.

BDPRICEFINDER – Multi-Vendor E-Commerce Platform | *ASP.NET MVC, Razor Views, C#, HTML, CSS, JavaScript, SQL Server* Website
- Developed a full-stack multi-seller, vendor, corporate buyer marketplace with role-specific dashboards, vendor workflows, approvals, hierarchical permissions.
- Implemented product lifecycle, dynamic variants, inventory/orders, 2-step email OTP auth, coupons, EMI, warranty, Elasticsearch search, Redis caching.

LOCAL AGENT – Local-First Autonomous Coding Platform | *ASP.NET Core, C#, PostgreSQL, EF Core, Ollama, Roslyn, SignalR* GitHub
- Built local-first autonomous agent: persistent sessions, DAG task planning, dependency validation, fan-out/fan-in execution, retry budgets, verification loops.
- Implemented SHA-256 incremental repository indexing, Roslyn symbol extraction, cross-file reference graphs, layered memory with semantic/lexical retrieval.

ATLAS – Enterprise Intelligent API & Event Platform | *ASP.NET Core, C#, PostgreSQL, Redis, Kafka, OpenTelemetry* GitHub
- Engineered a modular platform with API management, service registry, traffic routing, Kafka event processing, retries, DLQ/replay, Redis Lua rate limiting.
- Added circuit breakers, tenant authZ, OpenTelemetry SLO/error-budget analysis, health probing, incident management, deployment regression analysis, audit.

AURORA – Organizational Resilience & Decision Intelligence Architecture | *ASP.NET Core MVC, C#, PostgreSQL, EF Core, SignalR* GitHub
- Developed an enterprise digital-twin platform: BFS/DFS, Dijkstra, upstream/downstream propagation, SPOF/bottleneck scoring, disruption simulation.
- Added weighted risk scoring, AI investigation, human-in-the-loop approvals, audit trails, multi-tenancy; separated implemented from planned RAG/multi-agent.

SENTINEL – Enterprise Operational Risk & Resilience Simulator | *ASP.NET Core MVC, C#, PostgreSQL, Redis* GitHub
- Built operational-risk simulator: dependency graphs, BFS/DFS, SPOF detection, critical-path analysis, weighted failure propagation, business-impact modeling.
- Added genuine Monte Carlo simulation (normal/log-normal), recovery-strategy scoring, resilience metrics, risk heatmaps, background jobs, graph visualization.

AEGIS – Intelligent Incident Response & Digital Operations Platform | *ASP.NET Core MVC, C#, PostgreSQL, Redis* GitHub
- Developed an SRE/AIOps platform with a synthetic infrastructure digital twin: Failure → Detection → Correlation → Root Cause → Impact → Remediation.
- Implemented rolling z-score anomaly detection, graph-based incident correlation, weighted root-cause ranking, business-impact analysis, approved runbooks.

NIRBHOR – Bilingual AI Personal Administrative Agent | *ASP.NET Core MVC, C#, PostgreSQL, EF Core, Identity, SignalR, Anthropic* GitHub
- Built a bilingual AI agent (English, Bangla, mixed-language) for tasks such as NID correction and passport renewal via conversation and tool execution.
- Implemented versioned prompt management, multilingual evaluation datasets, accuracy-gated evaluation, audit logging, notifications, cost tracking, OpenTelemetry.

E-COMMERCE – ASP.NET MVC/Razor Web Application | *ASP.NET MVC, C#, Razor Views, Entity Framework, SQL Server* GitHub
- Developed responsive database-driven e-commerce app with separated Controllers, Models, Services, Views, supporting product management and shopping cart.

Research Paper

A Multi-Stage Deep Learning Framework for Smartphone E-Waste Classification, Damage Assessment, Metal Value Estimation, and Recycling Recommendation | *Co-Author* | *BRAC University* Paper Link

Co-authored a research study proposing a five-stage deep learning framework for smartphone e-waste management, integrating device model identification, condition classification, damage severity assessment, recyclable metal value estimation, and recycling recommendations. Evaluated CNN, YOLO, and Vision Transformer architectures, achieving 91.91% test accuracy with DINOv2 ViT-B/14, 92.12% with Swin Transformer V2 Tiny, and 94.67% with MaxViT-Tiny across classification stages. Integrated MetalpriceAPI for metal valuation in BDT and developed a web-based demonstration using FastAPI and React.

Skills

Backend & Web: C#, ASP.NET Core/MVC, Razor, REST APIs, SignalR, Python, JavaScript, HTML5, CSS3.
Data & Infrastructure: SQL Server, PostgreSQL, Entity Framework Core, Redis, Elasticsearch, RabbitMQ, Kafka, Docker, Git/GitHub.
Architecture & Engineering: System Design, Modular Monolith, Dependency Injection, Event-Driven Design, Caching, Query Optimization, Authentication/RBAC, OpenTelemetry, Testing (k6).
AI Integration: OpenAI, Anthropic, and Google AI APIs, Multi-Agent Orchestration, Prompt Management.

Certificates

CS50's Introduction to Artificial Intelligence with Python – Harvard University | **IBM RAG and Agentic AI Professional Certificate** – IBM | **AWS Developer Professional Certificate** – Amazon Web Services (AWS) | **Microsoft DevOps Engineering AZ-400 Professional Certificate** – Microsoft | **Generative AI for Software Development Professional Certificate** – DeepLearning.AI

Education

B.Sc. in Computer Science – BRAC University | Dhaka-1212, Bangladesh. **2026**
Higher Secondary Certificate – Dhaka Residential Model College | Dhaka-1207, Bangladesh. **2020**
Secondary School Certificate – Ibn Taimiya School and College | Cumilla-3500 Bangladesh. **2018**