AHSANUL AMEEN SABIT

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WORK EXPERIENCE

IQVIA

Software Development Engineer 3 *Apr 2025 – Present*

- Architected Planner Algorithm v1.0 for dynamic audience segmentation; initiated Planner Agent 2.0, achieving a 50% reduction in configuration complexity. Developed an MCP server with enriched tools enabling form-based configuration in Algorithm Studio, significantly improving guided agent configuration workflows.
- Developed API endpoints for the Judge Agent metric-evaluation engine, transforming raw data into actionable insights for performance tracking.
- Optimized ETL pipelines and integrated data-service APIs for Snowflake datamarts, enhancing agent response efficiency, security, and scalability.

Software Development Engineer 2 *Jan 2024 – Mar 2025*

- Developed the multi-agentic UI configuration backend from scratch as part of AI Assistant integration, reducing configuration complexity by 80%.
- Co-led an agile backend team; designed, implemented, and reviewed layered architecture features for the Next Best Action App using .NET Core and EF Core.
- Improved API performance by 60% via advanced caching mechanisms and authored SQL scripts for multi-tenancy testing management.
- Built a proactive messaging bot service as a proof-of-concept, integrating MS Teams Bot with existing applications using the Bot Framework SDK.

Software Developer *Sep 2022 – Dec 2023*

- Implemented translation functionality for the Next Best Action (NBA) platform, increasing regional offerings by 50% in Japan and other Asian markets.
- Managed daily builds, patches, and release processes using Amazon EKS and GitLab Pipelines, ensuring robust and reproducible deployments.
- Mentored three junior developers during onboarding, promoting best practices and accelerating team productivity.

Samsung R&D Institute Bangladesh

Software Engineer *Jun 2022 – Aug 2022*

- Conducted R&D on Generative Adversarial Networks (GANs), contributing to experimental ML research initiatives.
- Collaborated with the web engine team; gained hands-on exposure to Chromium's high-level architecture, rendering pipeline, and painting mechanism.
- Prepared detailed sequence diagrams for complex method stacks, elucidating system behavior and aiding in design decisions.
- Performed code reviews, issue resolution, and unit testing to ensure robust implementation of research prototypes.

EDUCATION

Bachelor of Science in Computer Science and Engineering February 2017 - April 2022
Bangladesh University of Engineering and Technology **CGPA: 3.53/4.00**

Higher Secondary Certificate (HSC) July 2014 - July 2016
BAF Shaheen College, Dhaka **GPA: 5.00/5.00**

TEST SCORES

IELTS Scheduled November, 2025

UNDERGRADUATE THESIS

A study on graph based secret-sharing schemes*, supervised by *Dr. Md. Saidur Rahman
Investigated graph-based secret-sharing and key agreement protocols optimizing share sizes and security against eavesdroppers.

ACADEMIC & PERSONAL PROJECTS[links embedded]

Sign Language Classification (2022): An ML project comparing multiple datasets and achieving higher accuracy through a combined CNN model. Datasets: Sign Language MNIST, ASL Alphabet, Digits. Languages & Frameworks: Python (TensorFlow)

Interactive Code Learning Platform (2021): Developed a coding skill evaluator web application with a RESTful API backend using Node.js, Express, and Passport. Utilized PostgreSQL as the database and implemented the frontend with Vue.js, Vuex, and BootstrapVue.
Demo: Interactive Code Learning Platform

ICMP Ping Spoofing + ICMP Redirect Attack (2021): Built an attack tool in C and Python, enabling spoofing of ICMP echo requests with custom source IPs, and created a redirect attack tool to advertise vulnerable gateways to victims.

Line of Action (2020): Developed a Java-based AI bot with a JavaFX interface for the game "Line of Action," utilizing adversarial search algorithms.

Nand to Tetris(Part 1 & 2)(2020): There are 12 projects originated from a crash course on how computers actually operate. In the first part, we've built the hardware hierarchy of a simple computer named *"Hack"* through six sequential projects. In the second part, we developed a two-tier compiler and a simple OS for a high-level Java-like object-oriented language named *"Jack"*, which doesn't support inheritance. Outputs were tested via Coursera autograder. Technologies: HDL, C, C++, Java

Almost C Compiler(2019): Created a compiler for a subset of the C language family, which is compatible with x86 microcontrollers. Can be emulated via an 8086 emulator. Technologies: C++, flex/lex, yacc/bison

Smart Stick (2019): Designed a walking cane for visually impaired users using Bluetooth, sonar sensors, and an ATmega32 microprocessor. The cane detects obstacles and can be located via an Android app. Language: C++

Network Chess (2018): Developed a two-player chess game supporting both offline and online (client-server) play using socket programming. Implemented GUI for board and server using JavaFX, applying strong OOP principles.

UNDERGRADUATE COURSEWORKS

Algorithm Engineering, Machine Learning, Artificial Intelligence, Computer Security, Software Engineering, Compiler, Basic Graph Theory, High Performance Database System

ACHIEVEMENTS

Impact Program – Silver Award, IQVIA (2025)
Recognizing the immense contribution to designing and developing the Agent Studio platform and NBA agent-based offerings.
Impact Program – Platinum Award, IQVIA (2023) Highest level award of IQVIA Impact Program (out of six), recognizing contributions to the Next Best Actions team. Important contributions towards building the Dhaka team, delivering NBA translation stories, and improving revenue opportunities across regions.
SWC Professional Level Programmer, SAMSUNG (2022)
Awarded internally by Samsung R&D Institute Bangladesh in recognition of achieving Professional Level in the 'SWC Profession Test'
10th Best Paper Award – IEEE CS BDC Summer Symposium (2021)
Title: Rapid Secret Sharing using st-Numbering Scheme (PID-74) | Track 4: 5G Internet and Security.
Specialist at Codeforces

Solved 600+ problems in the Codeforces online judge and 1500+ problems overall considering various platforms like HackerRank, Leetcode

Government Scholarship, Bangladesh (2016-2022)

For outstanding performance in the Higher Secondary School Certificate Examination

Government Scholarship, Bangladesh (2014-2016)

For outstanding performance in Secondary School Certificate Examination

SKILLS

Programming Languages	C#, Python, C, C++, Java, Shell, Javascript, Assembly, Swift
Build Tools	NuGet, .NET CLI
BackEnd Frameworks	ASP .NET Core, Entity Framework Core, FastAPI, Node.js, Express, Passport
Database Experience	PostgreSQL, MSSQL, MongoDB, Firebolt, Snowflake, Oracle
UI Frameworks	Vue.js, Vuex, Angular, OpenGL, JavaFX
Operating System	Windows, Linux(Ubuntu)
Version Control	Github, GitLab
Technical Writing	LaTeX, Beamer, Overleaf
DevOps Tools	Docker, Kubernetes
Agent Development Tools	LangSmith, LangFlow, MCP
Cloud	AWS, Azure, GCP

CERTIFICATIONS

Build ETL Pipeline in GCP: Load GCS Data to BigQuery via Dataflow: Learned to create an ETL pipeline using GCP, extracting the data from GCS, cleaning and transforming it using Apache Beam and Dataflow, and finally loading it to BigQuery.

Introduction to AI Agents IQVIA: Understanding AI Agents and their types.

Designing and Implementing AI Agents: Various AI agents and their reasoning cycle: ReAct, MRKL, and HITL

Building AI Agents Using Langflow: Prototyped a ReAct agent using Langflow, using Azure OpenAI models, added web search, vector DB, Knowledge Base, RAG

Introduction to Agile - Scrum and Kanban: Adopt the Agile mindset, discover Scrum and its development cycle, Kanban

REST API vs GraphQL vs gRPC - The Complete Guide: Learn the three most popular Web APIs in the industry and how to choose the right one while knowing the advanced concepts and demonstrations, pros and cons, and utilizing a decision tree.

Software Architecture: REST API Design - The Complete Guide: Best practices of RESTful API design, correct use of HTTP Verbs, URL structure, and response codes, Authentication & Authorization capabilities, improving performance and reducing latency

Microservices Architecture - The Complete Guide: The 9 attributes of Microservices, its architectural process.

Deep Learning Specialization: Built neural network architectures such as Convolutional Neural Networks, Recurrent Neural Networks, LSTMs, Transformers, and learned how to make them better with strategies such as Dropout, BatchNorm, and Xavier/He initialization. Learned their industry applications using Python and TensorFlow, and tackled real-world cases such as speech recognition, music synthesis, chatbots, machine translation, natural language processing, and more