

ANIK BARUA

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PROFESSIONAL SUMMERY

Fresher with knowledge in a wide range of technologies including C/C++, Python, JS . Experience includes developing functional applications like an automated medical ordering system and integrating **real-time APIs**. Committed to writing clean, maintainable code and seeking an internship to further develop professional development skills

ACADEMIC EXPERIENCE

North South University, Dhaka
Compute Science and Engineering
CGPA : 77 percentile

April, 2026

Hazera Tazu University College, Chittagong
Higher Secondary Certificate

December, 2020

SKILLS SUMMERY

- **Language:** Python, JS, C/C++, GOLANG, C#, SQL, POSTGRES, SHELLSCRIPT, HTML & CSS
 - **Problem Solving :** 500+ solved (Codeforces, Leetcode, Atcoder, Vjudge, Lightoj and other ogs) and icpc preliminary online constests 2023, 2024
Vjudge : <https://vjudge.net/user/TERRACODER>
LeetCode : https://leetcode.com/u/ANIK_BARUA
 - **Libraries & Frameworks:** Pandas, Numpy, Scikit-Learn, Matplotlib, MERN(basic), Node JS
 - **Tools:** Postgres, Git and GitHub, linux CLI, Docker, Kubernetes, Jenkins, AWS
 - **IDEs:** Visual Studio Code, Jupyter Notebook, Golang, Eclipse, Pycharm, Webstrom
 - **Soft Skills:** Analytical Problem Solving, Research & Documentation, Cross-functional Teamwork, English (fluent)
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PROJECT AND RESEARCH

HTTP 1.1 Protocol Implementation From Scratch | TCP, UDP, GO, | https://github.com/AnikBarua007/HTTP-1.1_protocol-server-from-scratch-in-Go

- Developed a lightweight HTTP/1.1 server in Go using raw TCP sockets, implementing custom request-line, header, and body parsing
- Built core protocol-handling components including HTTP response generation, header normalization, Content-Length-based body processing

Chirpy REST API Server | Go, PostgreSQL, JWT, Mongoose, SQLC | http://github.com/AnikBarua007/RestAPI_http_server_go

- Developed a RESTful API backend in Go using net/http with full CRUD operations for users and chirps, implementing secure JWT-based authentication with access/refresh token flows and Argon2 password hashing
- Designed and integrated a PostgreSQL database layer using SQLC for type-safe query generation, including schema migrations for users, chirps, and refresh tokens with proper relational data modeling
- Built production-ready features including content moderation (profanity filtering), webhook endpoints for third-party integrations (Polka payments), and admin metrics/monitoring endpoints

Python-based AI coding agent from scratch using the Google Gemini API | | 2025 | https://github.com/AnikBarua007/AI_agent_python

- Engineered a Python CLI agent around google-gemini (gemini-2.5-flash) using iterative function-calling orchestration, where model outputs and tool responses are appended across turns to enable multi-step reasoning and autonomous task completion.
- Implemented a secure local tool-runtime layer with path canonicalization, sandboxed working-directory enforcement, bounded file reads, .py execution gating, subprocess timeout controls, and structured error propagation.

Early detection of kidney stones via image segmentation using Quantum Machine Learning for CSE 498R directed research under Mr. Shafayat Usman Sir | QML, Qiskit, Tensorflow, Pandas | 2025

- Preprocessed more than 1000 kidney stone images for quantum framework qiskit
- Achieved a **81% detection accuracy** rate, significantly improving reliability over current models.
- Used an underlying quantum layer alongside traditional CNN layers