



MD MONOARUL MORSHED

Computer Engineering Undergraduate & Software Developer

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👤 Professional Summary

Final-year Computer Science graduate at Sejong University with hands-on experience building end-to-end web applications, AI-powered systems, and edge-deployed computer vision solutions. Strong background in full-stack development, IoT, and machine learning, backed by co-authored research submissions at top-tier venues (IEEE Transactions on Consumer Electronics and Applied Energy). Experienced Teaching Assistant and infrastructure specialist seeking to contribute technical depth and scalable system architecture to innovative technology teams.

📁 Professional Experience

03/2026 – Present	Sejong University Teaching Assistant - Mentoring undergraduate students on full-stack architecture, API design, and cloud deployment. - Facilitating lab sessions and guiding students through software development lifecycles.	Seoul, South Korea
2020 – 2021	Xeron Preservation Team Leader Led a technical team in project execution, coordinated timely delivery of IT solutions, fostered collaboration, and maintained execution quality under tight deadlines.	Dhaka, Bangladesh
2019 – 2020	Tampaco Foils Ltd. Server Manager Managed enterprise server infrastructure and production environments with a focus on availability, security-aware operations, incident response, and server-client communication efficiency.	Dhaka, Bangladesh

🎓 Education

03/2022 – 02/2027	B.S.c in Computer Science & Engineering Sejong University - CGPA: 3.61 / 4.5 (90.5% equivalent) Degree Awarded: February 25, 2027	Seoul, South Korea
2019	Diploma in Engineering Computer Technology Bangladesh Institute of Information Technology, Bogura	Bogura, Bangladesh

Technical Skills

Cloud deployment

AWS, Azure, GCP, Docker, Kubernetes, Terraform, Nginx, Server Management

Incident response

Root Cause Analysis, Log Analysis (ELK/Grafana), System Monitoring, Patch Management

Software development lifecycles

Agile/Scrum, Git Workflows, CI/CD, Test-Driven Development (TDD)

Key encapsulation mechanism

Kyber, Hybrid Key Exchange, Public Key Infrastructure (PKI)

Networking protocols

TCP/IP, UDP, HTTP/2, WebSockets, MQTT, DNS

Full-stack architecture

Client-Server Model, Microservices, Event-Driven Architecture, State Management

Frontend

JavaScript, React, Tailwind CSS, HTML/CSS

Edge & IoT

ESP32, Raspberry Pi, OAK-D, BLE/WiFi, Docker

Tools & Systems

Git, Linux, Windows, Server & Client Management, Networking

Server infrastructure management

Linux Administration, Bash Scripting, Nginx/Apache, Systemd, Load Balancing, Process & Resource Management

Security-aware operations

OWASP Top 10, DevSecOps, Access Control (IAM), Data Encryption

Post-quantum cryptography

NIST PQC Standards (ML-KEM, ML-DSA), Liboqs, OpenSSL

Secure authentication protocols

OAuth 2.0, OpenID Connect, JWT, Mutual TLS (mTLS), SAML

API design

RESTful APIs, OpenAPI/Swagger, Postman, JSON Schemas

Interactive assessment generation

Dynamic Form Builders, Automated Evaluation Engines, LLM Prompting Pipelines

Backend

Python, Flask, FastAPI, REST APIs, Java, PHP

AI / ML / CV

YOLOv8, OpenCV, NVIDIA NIM, Federated Learning, Agentic Workflows

Languages

Bengali

Native / Mother Tongue



English

Excellent (Professional Proficiency)



Hindi

Conversational / Fluent (Spoken)



Urdu

Conversational / Fluent (Spoken)



Korean

Intermediate / Working Proficiency



Featured Projects & Architecture Design

Aetheris: Agentic OS Capability Broker

Actively developing an advanced agentic operating system framework focused on capability brokering and modular system orchestration for autonomous workflows.

ExamShield (AI-Powered Exam Proctoring System)

Developed a multi-camera AI proctoring system using YOLOv8, OpenCV, Flask, and ESP32, with Raspberry Pi edge deployment scaled to 16-camera layouts for large-scale examination halls.

Prompt-Studio

Built an agentic AI prompt optimization tool using a Python HTTP server and NVIDIA NIM APIs, featuring intelligent local fallback mechanisms.

PQC-Lattice-Sandbox

Created a zero-dependency implementation of a post-quantum cryptography key encapsulation mechanism based on module-lattice principles.

Cloud Hosting System

Researched and developed a software solution supporting domain hosting, reselling, VPN, and VPS services.

SJ MART

Built an inventory management system featuring a PHP dashboard and secure authentication protocols.

PDF Quiz Generator

Developed an AI-powered tool for extracting summaries and automatically generating interactive assessment questions from PDF files.

Research & Publications

QuantumGuard: Hybrid Quantum-Classical Semantic and Policy Guardrails for LLM-Enabled Smart-Home Consumer Electronics

Status: Under Review — Co-authored, submitted to IEEE Transactions on Consumer Electronics.

Quantum Computing for Big Data Optimization in Decentralized Smart Grids: A Comprehensive Review of Computation, Security, and P2P Energy Transactions

Status: Under Review — Co-authored, submitted to Applied Energy.