



JOTEE SARKAR JOY

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SUMMARY

Computer Science & Engineering graduate with hands-on experience across full-stack web development, applied cryptography, computer networking, and machine learning. Proven ability to rapidly adapt to new technologies and ship production-grade projects across diverse technical domains. Experienced in business operations as the co-founder of an electronics retail startup. Strong collaborator and communicator, eager to tackle complex engineering challenges and contribute meaningfully from day one.

EDUCATION

BRAC University, Dhaka, Bangladesh

2022 – 2026

Bachelor of Science in Computer Science & Engineering — CGPA: 3.67/4.0

Relevant Coursework: Data Structures & Algorithms, Computer Networks, Cryptography & Cryptanalysis, Operating Systems, Database Systems, Artificial Intelligence, Software Engineering, System Analysis & Design

THESIS

Interpretable Deep Learning for Cervical Cancer Detection Undergraduate Thesis (CSE400)



- Built an Attention-Based Multiple Instance Learning (AB-MIL) pipeline on a ResNet50 backbone, achieving 95% accuracy on 2-class triage and 92% on 3-class severity grading on a novel, multi-center Bangladeshi Pap smear dataset.
- Curated the clinical dataset using Cleanlab confident learning and predictive entropy, refining 3,601 images into 2,374 high-quality training bags.
- Generated pixel-level diagnostic attention heatmaps directly from MIL spatial weights, providing clinically verifiable interpretability.

WORK EXPERIENCE

Co-Founder, Microspark Technologies Limited

Mar 2025 – Present

- Operate an electronics retail business supplying project components to student makers across Bangladesh; built and run the store's point-of-sale and inventory system.
- Processed 1,000+ orders from 640+ customers with a 93.83% delivery success rate.

Content Designer, Sysonex

Jan 2023 – Dec 2024

- Created 650+ digital and print design assets monthly, maintaining 100% brand consistency across all deliverables.
- Developed visual content that improved audience engagement by 20%, aligning output with project goals across cross-functional teams.

Operations Intern, Ostad

2023

- Managed the platform's admin panel to deliver educational content for 4,500+ active learners.
- Monitored attendance and performance data to resolve delivery issues, collaborating with instructors to design materials for live classes and quizzes.

Social Media Contributor, 10 Minute School

2021 – 2022

- Managed a 1M+ follower Facebook page and a 1.5M-member community group to drive student engagement.

PROJECTS

choto.cc: Link Management & Analytics Platform



- Engineered a high-uptime link management and analytics platform (Next.js, TypeScript, Tailwind CSS) on Edge infrastructure, sustaining 99.9% uptime with a freemium model for university users.
- Built real-time analytics with UTM tracking, bot/crawler filtering, and password-protected, auto-expiring links.

Federal Flight Agency Network: Enterprise Network Design Coursework: Computer Networks (CSE421)



- Designed a redundant enterprise network in Cisco Packet Tracer with hierarchical VLSM subnetting, RIPv2 routing with static failover, and DHCP/DNS services across 5,000+ simulated hosts.

Counsel: Secure Legal Case Management System Coursework: Cryptography and Cryptanalysis (CSE447) 

- Built a zero-trust, encrypted platform implementing RSA (2048-bit), ECC, AES-256-GCM, HMAC-SHA256, and PBKDF2 entirely from scratch, with RBAC-enforced session management via ECDSA-signed JWTs.

CoachUp: Collaborative Online Test Platform Coursework: Software Engineering (CSE470) 

- Engineered a full-stack real-time platform (Next.js, Node.js, Express.js, MongoDB) for coaching centers, with a live WebSocket-based test environment and instant auto-grading.

Sampurna: Artisan Marketplace Platform Coursework: System Analysis & Design (CSE471) 

- Built a full-stack marketplace with a serverless e-commerce architecture, a Google Gemini-powered design studio, NextAuth.js 2FA, and SSLCommerz payment integration.

Retail Shop Management & POS System Coursework: Android App Development (CSE489) 

- Built a mobile Point-of-Sale and inventory app (Flutter, Dart, Express.js, MongoDB) with role-based dashboards, barcode scanning, and automated stock tracking.

DoseFlow: Smart Medicine Adherence Box Coursework: Computer Interfacing (CSE360) 

- Engineered an IoT medication-adherence system (Arduino, ESP32) using ToF/RTC sensors for physical dose verification, featuring an offline-buffered state machine and cloud-synced logging.

Disease Classification Pipeline Coursework: Artificial Intelligence (CSE422) 

- Built a leak-proof disease classification pipeline evaluating supervised and unsupervised ML models (KNN, LR, MLP, K-Means), utilizing ROC/AUC analysis to expose systemic dataset bias and a ~33.3% random-chance baseline.

LEADERSHIP

Ambassador Team Lead, 10 Minute School 2018 – 2021

- Led and mentored a team of 71 ambassadors, training 20+ new members and coordinating outreach that engaged 1.5M+ students nationwide.

SKILLS

- **Languages:** Python, C, TypeScript, JavaScript, HTML/CSS, SQL
- **Web & Databases:** React, Next.js, Node.js, Express.js, Tailwind CSS, REST APIs, WebSockets, MongoDB, MySQL
- **Machine Learning & Data:** Scikit-Learn, Pandas, NumPy, Matplotlib, ResNet50, Attention-Based MIL
- **Cryptography & Security:** AES-256-GCM, RSA, ECC, HMAC, PBKDF2, JWT/ECDSA, RBAC
- **Systems & Hardware:** Arduino, ESP32, Cisco Packet Tracer, VLSM, DHCP/DNS (CCNA in progress)
- **Tools & Practices:** Git/GitHub, Figma, Adobe CC, UI/UX Translation, Debugging & Optimizing, Research

CERTIFICATES

- **Python Basics** – HackerRank 
- **Python Fundamentals for Beginners** – Great Learning Academy 
- **Fundamentals of Digital Marketing** – Google Digital Garage 
- **Presentation Skills** – BRAC University 

REFERENCES

Dr. Jannatun Noor Mukta Thesis Supervisor, Dept. of CSE, BRAC University
Contact details available on request

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