

# SAROWAR ALAM MINHAJ

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## EDUCATION

### North South University

*Bachelor of Science in Computer Science; GPA: 3.11 / 4.00*

Dhaka, Bangladesh

*June 2020 – July 2025*

- **Relevant Coursework:** Data Structures & Algorithms, OOP, Operating Systems, DBMS, Theory of Computation, Deep Learning, Software Engineering, Computer Architecture

### Udayan Higher Secondary School

*Higher Secondary Certificate; GPA: 4.75 / 5.00*

Dhaka, Bangladesh

*March 2017 – May 2019*

## COMPETITIVE PROGRAMMING

### NSU Problem Solvers

*Sport Programmer*

June 2020 – July 2025

*North South University*

- Qualified for the **2023 ICPC Asia West** Continent Final
- Four-time participant in the **ICPC Dhaka Regional Contest** (2021–2024).
- Became **1st Runner-Up** out of 100 contestants in Intra-NSU Programming Contest 2023.
- Took part in various Inter University Programming Contests.
- Contributed as a judge and problem setter at Intra-NSU Junior Programming Contest 2023.
- Organized programming contests and DSA bootcamps for junior students.
- Solved around 2000 problems on different online judges. Codeforces: sarwar\_\_ (Max Rating 1527). 📄

## TECHNICAL SKILLS

**Languages:** C/C++, Java, Python, JavaScript, TypeScript

**Frontend:** React, Redux, TailwindCSS, Vite

**Backend:** Node.js, Express, Flask, FastAPI

**Databases:** MySQL, MongoDB, Redis, Firebase

**AI/ML:** PyTorch, pandas, NumPy

**Tools:** Git, REST APIs, WebSockets, Jest, Playwright, Bash

## PROJECTS

### ExamEase | Automated Exam Proctoring & Evaluation System

Code

- Developed a full-stack online exam platform supporting MCQs, descriptive answers, and AI-assisted micro-viva
- Implemented face-based auto-proctoring to detect suspicious behavior during exams
- Integrated NLP models (BERT) to assist automated grading of descriptive answers
- Built voice-based micro-viva using OpenAI Whisper for speech-to-text evaluation
- Designed a responsive and user-friendly interface for real exam simulations
- Tech: React, TailwindCSS, Node.js, Express, MongoDB, Flask, BERT, Whisper

### PWS | Prescription Generation and Management

Code

- Built a web-based system to manage medical prescriptions, appointments, and patient records
- Implemented real-time medicine search and automated prescription storage
- Integrated SMS notifications for appointment confirmations
- Tech: PHP, MySQL (MariaDB), Bootstrap, jQuery, AJAX, Vanilla JavaScript

### EVM-STM32 | Electronic Voting Machine (EVM) for STM32 $\mu$ Controller

Code

- Designed a secure electronic voting system using STM32 microcontroller
- Implemented election logic using Nondeterministic Finite Automata (NFA)
- Interfaced 16x2 LCD display and 4x4 matrix keypad for user interaction
- Tech: STM32 (Blue Pill), Embedded C Programming, Finite Automata