Abdullah Al Mahin

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Passionate Computer Science student with experience in competitive programming and machine learning. Skilled in C/C++, Python, Go, with a strong algorithmic background. Motivated to contribute to the software field.

Achievements & Competitive Programming

- 2x ICPC Asia Dhaka Regional Finalist, 2023 - 2024
- Recent Contest Rankings
  - Ranked **13th** in PSTU IT Carnival Programming Contest 2024 (South Zone - Individual)
  - Ranked **38th** in BUET Inter University Programming Contest 2023, FirstStep
  - Ranked **109th** in SUST CSE Carnival Programming Contest 2024, BU MatrixMinds
  - Ranked **106th** in BUET CSE Carnival Programming Contest 2024, BU_Phantoms
  - Ranked **111th** in ICPC Asia Dhaka Regional Contest 2023, Team_Excalibur
  - Ranked **211th** in ICPC Asia Dhaka Regional Contest 2023, BU_Phantoms
- Competitive Programming
  - Codeforces: Expert **(Max Rating 1616)** **(Profile: Ab-Mahin)**
  - CodeChef: 4★ **(Max Rating 1802)** **(Profile: ab_mahin)**
  - LeetCode: **(Profile: Ab_mahin)**
  - Solved over 3000+ algorithmic problems across various platforms.

Projects

- **RLUCID: Noise-Regularized CNN for DDoS Attack Detection** *Undergraduate Thesis*
  Problem: High-accuracy DDoS detectors are vulnerable to small, targeted packet-level perturbations.
  Solution: Developed **RLUCID**, a lightweight CNN on packet-level flow fragments, using sign-based adversarial perturbations on selected header features during training.
  Benefits: Improved robustness to evasive traffic while maintaining **low latency** for real-time deployment.
  Code:
- **Multi-Agent DQN Coordination Framework**
  Problem: Multi-agent reinforcement learning systems suffer from coordination failures, frequent collisions, and ambiguous movement semantics.
  Solution: Designed a grid-based multi-agent simulator with **central-clock execution semantics**, head-on swap collision detection, and reward shaping.
  Code:
- **Pac-Man A* Pathfinding Simulation Environment**
  Problem: Real-time path planning in dynamic grid environments requires optimal navigation under strict performance constraints.
  Solution: Implemented a modular Pac-Man simulator with **A* pathfinding**, ghost behavior modeling, wall detection using Python and Pygame.
  Code:
- **AutoTraineeUpdater** (Python Automation Tool)
  Developed a Python-based automation system to update trainee information, reducing manual data entry.
  Implemented structured data handling and automated workflows for efficient trainee record management.
  Code:

Technical Skills

- **Languages: C/C++**, **Go**, Python, C#, JavaScript
- **Tools & Platforms: Linux**, **Docker**, Git, GitHub, CI/CD (GitHub Actions), Postman
- **Backend & Databases:** Golang (Basic), SQL Server
- **Cybersecurity & Networking:** NIDS, DDoS Attack Detection, Packet-level Traffic Analysis, Adversarial Training
- **Machine Learning & AI:** DQN, CNN, RNN, SVM, Linear/Logistic Regression, Decision Trees, kNN
- **Frontend:** HTML, CSS, Bootstrap

Education

University of Barishal January 2020 – December 2025
B.Sc. in Computer Science and Engineering *Barishal, Bangladesh*

- Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming, Database Management Systems
- **CGPA: 3.30**

Volunteer & Leadership Roles

- **President, Programming Club (CSEBU)** – University of Barishal *Jan 2025 – Dec 2025*
  - Organized programming contests and technical workshops, enhancing student engagement.
  - Contributed as a **problem setter** and contest coordinator.
- **DSA Instructor, CSE Club** – University of Barishal *Nov 2022 – Dec 2025*
  - Mentored 150+ students in data structures and algorithms, and organized multiple programming contests.