

SK. SABIT BIN MOSADDEK

ICPC World Finalist - Asia West Champion

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RESEARCH INTERESTS

Computer Vision, Deep Learning, Machine Learning, Artificial Intelligence

EDUCATION

- **Bangladesh University of Engineering and Technology** July 2024
B.Sc. in Computer Science and Engineering **CGPA: 3.83**
Notable Courses: Machine Learning, Artificial Intelligence, Bioinformatics, Computer Security, Major CGPA: 3.91
Software Engineering, Operating Systems, Computer Networks, Data Structures and Algorithms, Database, Computer Graphics, Numerical Methods, Discrete Mathematics, Programming Languages
- **Birshreshtha Noor Mohammad Public College** June 2018
Higher Secondary Certificate **GPA: 5.00 / 5.00**
- **Dhanmondi Govt. Boys' High School** April 2016
Secondary School Certificate **GPA: 5.00 / 5.00**

THESIS AND RESEARCH

- **Advancing Agricultural Field Segmentation Using Deep Learning** Jun 2024 - Present
Computer Vision, Machine Learning, Deep Learning
 - Agricultural field segmentation using deep learning models to identify crop types, weeds, and soil.
 - **Supervisor:** Dr. M. Sohel Rahman (Prof, CSE, BUET)
- **Face aging and de-aging using generative adversarial networks** Nov 2023 - Apr 2024
Computer Vision, Machine Learning, Deep Learning
 - A novel approach to face aging and de-aging using generative adversarial networks (GANs) with a focus on preserving identity and facial attributes.
 - **Supervisor:** Ajmain Yasar Ahmed (Lecturer, CSE, BUET)
- **Advancing Automatic Code Review and Code Refinement Generation Using Large Language Models** Jun 2023 - Present
Undergraduate Thesis (Manuscript in preparation), Software Engineering, NLP | Abstract
 - Designing prompts augmenting static program metadata (function call graph) and natural language summary, and low-rank quantized fine-tuning to improve code review comment and code refinement generation tasks
 - Tools and Technology: Python (Pytorch), TreeSitter, OpenAI API, CodeT5, CodeLlama, Llama 3
 - **Supervisor:** Dr. Anindya Iqbal (Prof, CSE, BUET), Dr. Toufique Ahmed (Postdoc, CS, UC Davis)

WORK EXPERIENCE

- **BRAC University, Lecturer** Jul 2024 - Present
Full time lecturer at the Department of Computer Science and Engineering, BRAC University.
- **Bangladesh University of Professionals, Competitive Programming Trainer** Jul 2023 - Dec 2023
Trained students at BUP to help develop a better algorithmic problem solving skill.

VOLUNTARY WORK

- **BUET IUPC Organizer** Jul 2023
Problemsetter, Judge and Organizer of BUET Inter University Programming Contest 2023
- **BDOI Judge** May 2023
Problemsetter and Judge of Bangladesh National Olympiad of Informatics 2023

ACHIEVEMENTS

International

- **Asia West Champion** in ICPC World Final 2022 26th
- 2nd Runner-up in ICPC Asia West Continent Final Contest 2021

Individual

- **Grandmaster** in Codeforces, maxrating: **2403** <https://codeforces.com/profile/SA01>
- 286th in Google Code Jam Round 3 2021
- 221st in Meta Hackercup Round 3 2021

National

- Champion in ICPC ASIA DHAKA REGIONAL CONTEST 2022
- 1st Runner-up in ICPC ASIA DHAKA REGIONAL CONTEST 2021
- Champion in RUET CSE FEST 2k22 IUPC”
- 1st Runner-up in Cefalo CodeFiesta 2022: AUST IUPC
- 1st Runner-up in Cefalo SUST Inter University Programming Contest 2023

Educational

- Dean’s List Scholarship in Level 1, 3 & 4 for extraordinary results.
- Awarded with grant for undergraduate thesis project in November 2023
- Talentpool Scholarship in Higher Secondary Certificate.

SKILLS

Programming Languages	C, C++, Java, Python, JavaScript, Assembly, Bash
Soft Skills	Problem Solving (Solved 3000+ problems), Teamwork
Frameworks	Node, React, SpringBoot, PyTorch, Tensorflow
Tools	Git, Docker, Ubuntu, Latex

PROJECTS

- Dream Sports League** [Javascript, Node, React, Postgresql] Github
- Online game based on English Premier League. This project was for our Software Development Sessional Course.
- Make my Trip** [Java, Spring Boot, Oracle] Github
- It is an online ticket booking and trip planning website. It was developed as our database project.
- C Compiler** [Lex, Yacc, Assembly, C] Github
- A C compiler which converts C code into Assembly Language
- Ray Tracing & Raster Based Pipelines** [C++, OpenGL] Github
- A project regarding computer graphics. Z-buffer Algorithm, Ray Casting and Ray Tracing are implemented to render 3D objects.
- Chess Engine** [Python] Github
- A chess engine built from scratch which can beat a few levels of stockfish. It also allows the user to play the game
- Fruit Ninja** [C++, IGraphics] Github
- It is one of my earliest project. It is one of the classic mobile game which we developed for computer.
- Retro Snake** [AtMega32, C++] Github
- A Hardware project which uses a micro-controller. LED is used to visualize the program.

REFERENCES

Dr. M. Sohel Rahman

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Dr. Anindya Iqbal

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