Robiul Islam

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Education

William & Mary **Aug 2024 – Ongoing**
PhD candidate, Department of Computer Science ,

Uttara University **Jan 2019 – Jan 2023**
Bachelor of Science in Computer Science and Engineering ,
CGPA: 3.98/4, class position: 1/50

Research Interest

- Autonomous System Safety and Security
- Perception
- LLM
- Software Engineering

Experience

William & Mary **Fall 2024 – Spring 25**
Graduate Teaching Assistant *Virginia, USA*

- CS 301: Software Development [Instructor: Prof. Peter Kemper] [Spring25]
- CS 301: Software Development [Instructor: Prof. Peter Kemper] [Fall2025]
- CS 301: Software Development [Instructor: Prof. Kevin Coogan] [Spring25]
- CS 301: Software Development [Instructor: Prof. Peter Kemper] [Fall2024]

Uttara University **Aug 2023 – Jan 2024**
Lecturer (Part-Time) *Uttara, Dhaka*

- Delivered engaging lectures and facilitated classroom discussions to enhance student learning outcomes.
- Prepared comprehensive course materials including lecture slides, assignments, and assessment guidelines.
- Provided academic advising and mentorship to students, supporting their academic and career growth.
- Assessed student performance through quizzes, assignments, and exams, offering constructive feedback.
- Participated in departmental activities and fulfilled responsibilities in line with university policies.

WPXPO **Mar 2023 – July 2023**
Junior Software Engineer *Shyamoli, Dhaka*

- Developed and maintained responsive web applications using PHP, React.js, HTML, CSS, and SCSS, improving cross-browser compatibility and user experience.
- Collaborated with senior engineers to design, implement, and optimize front-end components, ensuring clean, maintainable, and reusable code.
- Participated in code reviews and debugging sessions, ensuring adherence to coding standards and improving software quality.
- Gained hands-on experience in a professional software development environment, contributing to both individual and team-based projects.

Right Brain Solution **Sep 2022 – Feb 2023**
Software Engineer, Intern *Uttara, Dhaka*

- Built and styled responsive web pages using HTML and CSS, ensuring consistency across browsers and devices
- Developed cross-platform mobile applications using the Flutter framework, delivering functional prototypes and production-ready features.
- Contributed to active company projects, implementing front-end components and UI enhancements aligned with project requirements.

Selected Projects

How Developers Evaluated LLM-Generated Code and Debug | *LLMs, Python, Survey* **Feb 2025**

- Conducted a survey-based study on professional developers' use of Large Language Models (LLMs) for code generation, identifying common issues such as incorrect logic, syntax errors, inefficiency, and security vulnerabilities.
- Analyzed debugging practices combining traditional techniques (print statements, interactive debuggers) with LLM-assisted corrections, highlighting both the potential and limitations of current tools and suggesting improvements for reliability and developer support.

Investigating Using LLM for Close-Coding Tasks on Software Engineering Domain | *LLMs, Python* **Jan 2025**

- Investigated the application of Large Language Models (LLMs) in supporting qualitative research for software engineering, focusing on closed coding of non-numerical data such as interviews and survey responses.
- Applied prompt engineering to guide LLMs in accurately performing closed coding, demonstrating their potential to make qualitative analysis faster and more efficient.

Application of Multimodal Large Language Models in Autonomous Driving | *LLMs, Python* **Sep 2024**

- Developed and fine-tuned a Multi-modal Large Language Model (MLLM) for Autonomous Driving by creating a custom Virtual Question Answering (VQA) dataset to improve scene understanding, prediction, and decision-making.
- Applied a Chain-of-Thought reasoning framework, achieving improved performance in complex driving environments and demonstrating the potential of MLLMs to enhance safety and adaptability in AD systems.

Publications

Tonmoy Roy, **Md Robiul Islam**, Asif Ahammad Miazee, Anika Antara, Al Amin and Sunjim Hossain, "English Offensive Text Detection Using CNN-Based Bi-GRU Model", 2nd International Conference on Information and Communication Technology (ICICT).

Al Amin, Anik Sarker, Md Mahamoudul Islam, Asif Ahammad Miazee, **Md Robiul Islam** and Md Mahmudul Hoque, "Sentiment Polarity Analysis of Bangla Food Reviews Using Machine And Deep Learning Algorithms", 3rd International Conference on Advancement in Electrical and Electronic Engineering (ICAEEE).}

Robiul Islam, Al Amin, Aniqua Nusrat Zeeren, "Enhancing Bangla Language Next Word Prediction and Sentence Completion through Extended RNN with Bi-LSTM Model On N-gram Language", 3rd International Conference on Advancement in Electrical and Electronic Engineering (ICAEEE).

Md Robiul Islam, Md Mahamodul Islam, Mst. Suraiya Afrin, Anika Antara, Nujhat Tabassum and Al Amin, "PhishGuard: Enhancing Cybersecurity with Convolutional Neural Networks for Phishing URL Detection", 3rd IEEE International Conference on Artificial Intelligence for Internet of Things (AIIoT).

Competitive Programming

ACM ICPC Dhaka Regional | *Data Structure and Algorithms* **November 2022**

- Represented my university in the prestigious ACM ICPC Dhaka Regional 2022, a world-renowned programming contest, after being selected among thousands of teams for expertise in Data Structures and Algorithms.

National Collegiate Programming Contest | *Graph, Tree, DSA* **October 2020**

- Represented my university at the National Collegiate Programming Contest(NCPC) 2020, competing in Graph, Tree, and Data Structures & Algorithms among selected top university teams nationwide.

All Solved Progblems | *Codeforces, Uva, CodeChef* **Apr 2019 – Ongoing**

- Solved over 1,500 programming problems utilizing various data structures and algorithms. [Ref1] [Ref2] [Ref3]
- Participated in 500+ online programming contests and 15 onsite programming competitions. [Ref4] [Ref5] [Ref6] [Ref7]

Select Honors and Awards

TribeCTF **September 27-28, 2025**

- Our team, **Musketeers**, secured **5th** position by points at TribeCTF, a flagship event by William and Mary CyberSecurity Center. [Ref]

Dean Awards **January 2019, 2020, 2021, 2022**

- Received for **four** consecutive academic years in recognition of maintaining a CGPA above 3.75.
- Awarded to students demonstrating outstanding academic performance and consistently ranking among the top achievers.

LeetCon **May 2023**

- Secured **18th** position through strong problem-solving, algorithmic thinking, and effective team collaboration under competitive conditions.

RIot Center Flug Hunt **October 2022**

- Participated in one of Bangladesh's most prestigious Capture the Flag competitions, hosted by Riot Center.
- Competed against 98 teams and secured **25th** position, demonstrating strong problem-solving, cybersecurity, and teamwork skills under time constraints.

PreCodeFest-Chapmions **November 2021**

- Led team "Brain-Not-Found" to secure **1st** place among 20 teams and 60 participants in Uttara University's PreCodeFest 2021 programming contest.

1st Runner-up of Intra Department Programming Contest **November 2019**

- Secured **1st runner-up** position in the annual programming contest organized by the Department of Computer Science and Engineering.
- Solved 4 out of 6 problems under competitive programming conditions, demonstrating strong problem-solving and algorithmic skills.

Technical Skills

Languages: Python, C++, SQL
Developer Tools: VS Code, Eclipse, Google Cloud Platform, Android Studio
Technologies/Frameworks: Pytorch, Keras, Tensorflow, Scikit-learn, Numpy, Pandas, Matplotlib, Github, LaTex

Leadership / Extracurricular

Grad-Volunteer **Fall 2024**
3rd CS Symposium *William & Mary*

- Coordinated with and welcomed guests during the event.
- Managed food arrangements and ensured smooth distribution.
- Assisted participants in preparing and delivering their poster presentations.
- Assisted in the overall organization of one of the department's largest annual events.

President **Spring 2021 – Fall 2022**
Programming Club *Uttara University*

- Served as President of one of the largest clubs at my university.
- Organized multiple programming contests to engage and challenge students.
- Conducted weekly Friday classes on data structures and algorithms.
- Motivated and mentored students to improve their problem-solving and coding skills.

Co-convenor **Spring 2022 – Fall 2022**
Binary Fest *Uttara University*

- Participated in Binary Fest, one of the biggest annual events alongside Pitha Utshob, attended by hundreds of students.
- Member of the champion football team at Binary Fest.

Secretary **Spring 2021 – Fall 2021**
IEEE Student Branch *Uttara University*

- As part of an international organization, I organized a programming contest for the EEE and CSE departments.

Program Committee

Junior PC Member, MSR'26
PC Member, Graduate Research Symposium'26
Technology Coordinator, Graduate Research Symposium'26

References

Trey Woodleif, PhD
Assistant Professor
Department of Computer Science
William & Mary
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