# **ISA RAHMAN**

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## EDUCATION

Bangladesh University of Engineering and Technology (BUET) B.Sc. in Civil Engineering Honours and Dean's Merit Award Undergraduate Major: Transportation Engineering

Undergraduate Minor: Environmental Engineering

#### **Relevant coursework:**

- Urban Transportation Planning
- Socio-Economic Aspect of development
- Traffic Engineering Design

- Transportation Planning & Traffic Engineering
- Applied Mathematics for Engineer
- Highway materials and pavement design

## **RESEARCH EXPERIENCE**

## Undergraduate Thesis;

Title: Multi-Objective Traffic Signal Optimization using VISSIM and Genetic Algorithm Approach. Author: Isa Rahman, Md. A. E. Rabby, M. N. Murshed

- · Genetic Algorithm based multi-objective optimization is performed to improve a signalized intersection with non-lane-based traffic flow.
- Methodology of obtaining UML for traffic pattern and using as objective function for optimization.
- PTV VISSIM microsimulation is used to model the intersection and analyze performance.

## **CONFERENCE PAPER**

Rahman, I., Rabby, M. A. E., Murshed, M. N., Traffic Signal Control Optimization using Genetic Algorithm and VISSIM Simulation. 6<sup>th</sup> Bridging Transportation Researchers (BTR) Conference-2024. Presented on August 7, 2024.

#### **RESEARCH INTEREST**

- ITS
- Autonomous Vehicles, EV
- Simulation & Optimization

- Data analysis and Programming
- Transportation Safety
- Network Model

## STANDARDIZED TESTS

## **GRE®General Test**

Quantitative Reasoning- 166/170 | Verbal Reasoning- 146/170 | Analytical Writing- 3.5/6

# International English Language Testing System (IELTS)

• Overall- 7.5/9.0 | Speaking- 7.5/9.0 | Writing- 7.0/9.0 | Reading- 7.5/9.0 | Listening- 8.5/9.0

# **ACADEMIC PROJECTS**

## Capstone Project (Role: Team Leader)

Developing Advanced Parking Facility on BUET Campus

- Conducted initial survey and planning for the proposed parking facility building.
- Architectural design, cost-benefit analysis, alternatives; overall feasibility study of the project.
- Detailed design, Timeline, Load analysis and BOQ etc. for the entire proposal is developed.

# **Traffic Survey Report**

Survey for calculating saturation flow and capacity of the Shahbag Intersection.

# **MATLAB** Project

Building API to Analyse the Buckling of Slender Columns.

Level-2/2

Level-4/1

September 2024

CGPA- 3.76/4.00 Graduated July 2024

October 2024

Level-4

## SKILLS

Engineering Software: VISSIM, SUMO, AutoCAD, ETABS, SAP2000
Programming Language: Python, MATLAB, LATEX, C/C++
Expertise: Machine Learning, Genetic Algorithm, Data Analysis
Application Software: MS Office, G-Suite, Canva, Git
Languages: English (Fluent), Hindi (Conversational), Bangla (Native Speaker)

#### **RESEARCH GRANT**

#### **RISE Student Research Grant**

- Organization: Research and Innovation Center for Science and Engineering (RISE), BUET.
- Project: Undergraduate Thesis Research
- Grant Amount: Approximately 750 USD
- Date: 9th December 2023

#### HONOURS AND ACHIEVEMENTS

Dean's List Award   BUET	July 2024
University Merit Scholarship   BUET	January 2024
Champion (Poster Design)   National Environmental Carnival 2023	September 2023
<ul> <li>Finalist (Among Top 15)   Honda YES Award 2022</li> </ul>	February 2023
University Stipend   BUET	2021-2023
<ul> <li>Champion (Transportation Segment)   ESAB Mind Shift 1.0</li> </ul>	September 2019
Finalist   National Chemistry Olympiad 2017	February 2018
EXTRACURRICULAR ACTIVITIES	
Workshops & Seminars	
<ul> <li>Construction site visit   Hazrat Shahjalal Int. Airport (Third Terminal)</li> </ul>	September 2023
<ul> <li>Webinar on "Engineering Ethics"   ASCE Student Chapter, BUET</li> </ul>	December 2023
<ul> <li>Seminar on "Sustainable Public Transportation in Light of Bangladesh"</li> </ul>	BUET 2023
Leadership Experience	
Team Leader   Undergraduate Capstone Project. BUET	2023-2024

2022-2023

2017-2018

Deputy Secretary | BUET Innovation and Designing Club, BUET
Executive Member | Notre Dame Nature Study Club (NDNSC)

#### REFERENCES

Dr. M. Neaz Murshed	Dr. Rupak Mutsuddy
Associate Professor	Associate Professor
Department of Civil Engineering,	Department of Civil Engineering,
Bangladesh University of Engineering and	Bangladesh University of Engineering and
Technology, (BUET).	Technology, (BUET).
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