

Md. Mynul Hossain Chowdhury

[LinkedIn](#) [Email](#) [GitHub](#)

Contact no: +8801682-147112 Address: 415/G, M A Sobur R/A, Chittagong, Bangladesh

ACADEMIC CREDENTIALS

Bachelor of Urban and Regional Planning
Jan, 2018 – Feb, 2023 *Khulna University of Engineering and Technology*
CGPA: 3.19 (scale 4.00)
Thesis Topic: *Calibration of SUMO Microscopic Simulation for Heterogeneous Traffic Conditions of a Developing Economic City.*
I identified the major areas of traffic congestion & heavy traffic volume. To reduce conflict points, I proposed an alternative road geometry that could improve traffic mobility by reducing the number of conflict points. I developed a Model in Net edit & imported the traffic data for traffic simulation. Proposed scenarios have been calibrated & validated according to concerns about future traffic volume & capacity.

RESEARCH EXPERIENCES

Research Publication: Chowdhury, M.M.H., Chakraborty, T. (2023), “Calibration of SUMO Microscopic Simulation for Heterogeneous Traffic Condition of a Developing Economic City”, *Transportation Engineering*. (Under Review) ([See Details](#))

Undergraduate Project: Changing travel pattern dynamics of the passenger’s travel behavior during the COVID-19 outbreak.

Project scheduled: 3rd year 2nd term

Responsibilities: (1) I identified the problem & critical parameters of the mode-changing behavior; (2) Prepare a Questionnaire according to the analysis of mode shifting behavior of mobility; (3) Create a methodological framework; (4) Statistical test (McNamar Test, Man U Whitney test, Wilcoxon T test, Chi-Square test, KMO, and Bartlett’s Test, Spearman Correlation, Hypothesis test); (5) GIS for Mapping ([See Details](#))

Undergraduate Project: Assessment of Regional Diversity: A Study on Bangladesh.

Project Scheduled: 4th year 1st term

Responsibilities: (1) I Identified the parameter of Socio-demographic, Structural and ecological disparities; (2) Sentinel 2 - Multispectral Image & Landsat 8 - Surface Reflectance satellite images type has been used to collect data for calculating LST, NDVI, NDWI, NDMI, LULC purposes; (3) GEE has been used in the primary stage of assessment (Image collection & Processing), training the maximum point classified; (4) Data processing & Mapping (Contour map, LULC map, Road map, Structural map, Ecological diversity map) has been prepared by ArcGIS 10.5. ([See Details](#))

Research work: Analyzing Urban Expansion in an Automated Cloud Computational Platform: A Case Study of Chittagong Metropolitan Area.

Affiliation with Thesis Supervisor: Tanmoy Chakraborty, Assistant Professor, URP, KUET.

Responsibilities: (1) I have collected data from the Google Earth engine by using satellite images of Landsat 5,7 & 8; (2) Image collection through preprocessing of GEE; (3) Change detection has been calculated to predominately find out the LULC changes over time (Built up area); (4) Urban expansion calculated from 2000 to 2021; (5) Visual mapping used by using ArcGIS & further calculative analysis. ([See Details](#))

Undergraduate Project: Participatory Rural Appraisal of Maheshwarpara, Digholia Union, Khulna.

Project Scheduled: 4th year 2nd term

Responsibilities: (1) I Identified the problem through participatory approaches; (2) PRA tools (Social map, Resource map, Mobility Map, transect walk, Ven diagram, Problem tree, SWOT, Cause effect diagram, Mobility map, Seasonal diagram) has been used to identify the problems; (3) I Provide a feasible solution that can easily access by the inhabitants. ([See Details](#))

PROFESSIONAL EXPERIENCES

Project Internship, Amigos Construction

Aug,2022- Sep,2022

Project Involved on:

(1) Feasibility study of the Dupchanchia Upazilas Road Construction

(2) Digital Topographic Survey at Uposhohor (Road 21), Bogra.

Responsibilities: Data Collection, Data Management, Report Writing and Documentation, GIS Analysis.

Community Facilitator, GIZ Project

Apr,2023-May,2023

Project Involved on:

(1) Public hearing and recurring of the data for preparing Master Plan at Satkhira Pourashova.

Responsibilities: I facilitated incoming responders, curated their opinions, and made them feel comfortable sharing their insights for the Climate Resilient Inclusive Smart Cities (CRISC) Project.

Research Assistant, Supervised by Dr. Md. Manjur Morshed, KUET.

Dec,2023 - Present

Project Involved on:

(1) Quality Assurance and Feasibility study of Road infrastructure in Khulna.

Responsibilities: Report writing & Documentation, Microsimulation of vehicle, air quality (PMx & Environmental factor), Data Analysis & Visualization.

TECHNICAL SKILLS

OS	: Windows
Programming language	: Python, JavaScript, Machine Learning (RF, MLC, SVM, ANN)
Statistical Analysis	: Google Spreadsheet, IBM SPSS, Tableau
Traffic Simulation	: SUMO, PTV Vissim
Report Writing & Presentation	: Word, LaTeX, PowerPoint
Mapping & Drawing	: ArcGIS, QGIS, AutoCAD, Adobe Illustrator

LEADERSHIP EXPERIENCES

General Secretary , KUET Career Club	2022-2023
Presidium Member , Chittagong Association of KUET	2022-2023
Youth Ambassador , Youth School for Social Entrepreneurship	2019-2020
Logistic Officer , Hult Prize at KUET	2019-2020
College Prefect , Chittagong Cantonment Public College	2016-2017
Assistant Co-Ordinator , Bangabandhu Sheikh Mujibur Rahman Hall, KUET	2021-2023

ACCOLADES & EXTRACURRICULAR ACTIVITIES

Scholarship (Top 100), Certified Supply Chain Analyst, ISCEA Ptak Prize Global Case Competition	2020-2021
Champion , Debate Competition organized at BIP	2019
2nd Position at TVS making AD in FUNRUSH, KUET	2018
Top Scorer at Handball Tournament organized by CCPC	2016

REFERENCES

Dr. Md. Mustafa Saroar

Professor

Department of URP, KUET, Bangladesh

Khulna University of Engineering & Technology

Email: saroar.mustafa@urp.kuet.ac.bd

Mobile: +8801790004215

Tanmoy Chakraborty

Assistant Professor

Department of URP, KUET, Bangladesh

Khulna University of Engineering & Technology

Email: tanmoy.chakraborty@urp.kuet.ac.bd

Mobile: +8801727701295