

## Research Interests

I have academic and research experience in solving urban and regional planning problems through the application of geospatial and statistical tools, technologies, and policy-driven interventions. I am highly motivated to work on geospatial problems using machine learning, AI, and technology-driven methods, and I am eager to explore new technologies in this field.

## Education

2019 - **Bachelor in Urban & Regional Planning**, Faculty of Civil Engineering, Khulna University of Engineering & Technology (KUET), CGPA- 3.97 on 4.

2017 - 2019 **Higher Secondary Certificate (Science)**, RAJUK Uttara Model College, GPA - 5.00 on 5.00

## Thesis

### Bachelor's Thesis

Title *Urban Growth Dynamics and Socioeconomic Drivers in Khulna: A Spatiotemporal Perspective*  
Supervisor Professor Dr. Md. Manjur Morshed  
Description An urban expansion analysis using Remote Sensing and Socioeconomic Indicators (2000–2020) integrating binary classification, spatial statistics geographic distribution tools including JavaScript and geographic information systems.

## Projects

- **Regional Economics Analysis of Rajshahi Division**  
*Used PCA, SPSS, and GIS to map economic disparities.*
- **Assessment of Child Friendliness in Ispahani Colony, Khulna**  
*Conducted statistical analysis, field and questionnaire surveys.*
- **Transportation Surveys**  
*Traffic surveys, AutoCAD, GIS and Excel for intersection and mobility analysis.*
- **Comparative Analysis of Smart Village Potential: Evaluating the Smartness of Botiaghata and Betaga Union**  
*Field and questionnaire surveys, GIS and SPSS-based of digital infrastructure in rural Bangladesh*
- **Heritage Restoration - The Mosque City of Bagerhat**  
*Developed DPP & ToR with feasibility, budgeting, impact analysis & stakeholder mapping*
- **Water Scarcity in Rajshahi Division: A feasibility Study for Sustainable Solutions**  
*Meta-analysis and GIS-based rainwater harvesting and recharge strategy.*
- **Sustainable Desalination Technologies: A Solution to Coastal Water Scarcity in Bangladesh**  
*PV-RO technology planning with GIS mapping for coastal water security.*

## Experience

### Professional

Oct 2024 **Intern**, [Tiller](#), Dhaka, Bangladesh

Contributed to the “Preparation of Risk Sensitive Database for Core Area of Rangpur and Sylhet District Town (SRDP)” project by preparing zoning and Mouza maps using GIS.

2022 - **Research Assistant**, [Center for Environmental Research \(CER\)](#)

Assisting in urban planning and environmental sustainability research using geospatial tools like GEE, ArcGIS, and Python.

### Leadership & Extracurricular

2020 - 2024 **Team Leader**, Academic Lab Projects

Led multiple projects in GIS and urban planning.

2020 - 2023 **Co-Organizational Secretary**, [KUET Theatre](#)

Event planning and team coordination.

2019 - 2024 **Co-Founder**, Jolphoring Online Shop

Brand development and customer engagement.

### Awards

2019-20 **Dean's Award for Academic Excellence**, Faculty of Civil Engineering, Khulna University of

2020-21 Engineering & Technology (KUET)

2021-22 **Technical and Compensatory Scholarship**, Khulna University of Engineering & Technology (KUET)

### Skills

Coding Python, JavaScript, C, R

GIS & Data Analysis Tools ArcGIS, Google Earth Engine (GEE), Google Earth Pro, SPSS, Excel

Designing Software AutoCAD, SketchUp

Application Software Microsoft Excel, Microsoft PowerPoint, Microsoft Word

Techniques Remote Sensing, GIS Modeling, Spatial Analysis, Machine Learning

Academic Technical Writing, Research Design, Literature Review, Report Preparation, GIS-Based Modeling

Soft Skills Leadership, Teamwork, Project Management, Communication under Pressure

Languages Bangla (Native), English (Proficient)