

MD MOZAMMEL HOQUE

mh1764@scarletmail.rutgers.edu | (848) 565 1016 | www.linkedin.com/in/hoquemozammel | github.com/mmhoque16

EDUCATION

Rutgers University, New Brunswick, NJ
Edward J. Bloustein School of Planning and Public Policy
Master of Public Informatics

Expected to graduate in Spring 2026

University of Dhaka, Dhaka, Bangladesh
Master of Business Administration (MBA - Human Resource Management)

Graduated in 2015

University of Dhaka, Dhaka, Bangladesh
Bachelor of Business Administration (BBA - Management)

Graduated in 2014

Research Interest

Huma-Computer Interaction; Technology and Society; Digital Wellbeing; Socio-technical Systems; Public Interest Technology; Ethical and Inclusive Technology Design; Platform Governance; Disruptive Innovation;

Publications & Conference Presentations

1. Zarak Khan, Jiatong Yang, Rimshah Jawad, Ivania Martinez, **Md Mozammel Hoque**, Xinyi Zhao (2025, May). *MOMCare with AI: A Dual Embedding-based RAG-LLM Chatbot for Postpartum Depression*. Presented at the 10th International Conference on Information and Communication Technology for Intelligent Systems (ICTIS 2025), New York, USA. <https://bit.ly/3Z10RoA>
2. **Hoque, M.M.**, Khan, Z., & Samuel, J., Designing a Culturally Adaptive Chatbot for International Students: Focusing on Academic Support and Social Stress Management, NJBDA Symposium, May 16, 2025

ACADEMIC PROJECTS

LLM Chatbot (Public Informatics Studio 1 - Spring 2025): Develop a Chatbot for people who are suffering from Postpartum Depression.

LLM Chatbot (Directed Study – Spring 2025): Develop a Chatbot for supporting international students at Higher Education institutions to provide academic support and help manage social stress.

R-shiny App (Global Data Analytics Course Project - Spring 2025): Create a web-based dashboard based on World Bank data to demonstrate research results on the factors that drive economic growth globally.

Research (Data Visualization Course – Fall 2024): Explored the relationship between social media engagement and emotional well-being across demographic groups using R and ggplot2, highlighting age and gender trends in dominant emotions and screen time.

Research (Applied Multivariate Analysis Course Project – Fall 2024): Assessed the impact of socioeconomic and behavioral factors on health outcomes using linear regression models in R; identified statistically significant predictors such as smoking status, education, and work stress.

Spatial Analysis (Intro to GIS Course Project – Fall 2024): Conducted spatial analysis of salon locations in New Brunswick using GIS software to investigate their contribution to employment in economically disadvantaged areas; performed buffer and overlay analysis with income, poverty, and unemployment layers.

EXPERIENCE

Graduate Fellow – New Jersey State Office of Innovation (July 2025 to present)

- Working on developing an Agentic AI tool (Amazon Bedrock) to automate transcribing the legislative proceedings of the New Jersey Legislative Assembly.
- Working with the Data and Policy Team on multiple projects about how to improve the digital experience of New Jersey residents and Business People.

Rutgers University – Teaching Assistant (September 2024 to present)

Ramgarh Government College - Lecturer in Management (May 2017 to August 2024)

United Commercial Bank Limited - Senior Officer, Trade Finance (January 2016 to April 2017)

Bank Asia Limited - Intern, Human Resource Division (January 2014 to April 2014)

Award and Honor

- **Special Mention Award**, 12th New Jersey Big Data Alliance (NJBDA) Symposium, 2025 Poster Presentation: "MOMCare with AI – A Dual-Embedding RAG-LLM Chatbot for Postpartum Depression
- **Prime Minister's Fellowship**, Government of Bangladesh (2024) – Awarded for higher education abroad
- **Education Board Merit Scholarship, Bangladesh** – Awarded for securing 6th position in HSC Examination (2007)

Technical Skills

- **Programming Skills:** R (4 years) | Python (3 Years) | JavaScript (1 Year) | c++ (4 Year)
- **Machine Learning & Statistics:** scikit-learn, NumPy, pandas, TensorFlow 2, XGBoost; classical & ensemble models (Logistic Regression, Random Forest, Gradient Boosting, k-NN); model explainability (LIME, PDP)
- **GIS Skills :** ArcGIS Pro (Spatial Analysis, Geocoding, Geoprocessing, Buffer Analysis, Overlay Analysis)
- **Data Visualization & Dashboards:** R Shiny, Tableau, Power BI, matplotlib, seaborn, Plotly .
- **Workflow and Collaboration:** Git/GitHub, Jupyter Lab, VS Code, Google Colab

Standardized Test

- **Graduate Record Exam (GRE):** Quantitative Score (Taken in September 2022): 161; Verbal Score: 159; AW Score: 3

Extracurricular Activities

- **Elected Board Member as Social Chair** of Bloustein Graduate Student Association (BGSA) (March 2025 to present)
- **Treasurer and GSA Liaison Officer** for Public Informatics Student Group (March 2025 to present)

- **Mentee**, All Tech is Human (ATHT)
- **Champion**, Bengali and English Debate Competition – Bangladesh Academy for Rural Development, 2021.