

Education

PhD | Geospatial Information Sciences *(August 2025)*

The University of Texas at Dallas, TX, USA.

Dissertation topic: Understanding Spatial and Temporal Dynamics of Mammals in the Tropical Forests of Guyana.

Master of Science | Environmental Sciences *(December 2019)*

Jahangirnagar University, Savar, Bangladesh.

Thesis: Monitoring environmental radioactivity as a signature of anthropogenic pollution.

Bachelor of Science | Environmental Sciences *(December 2017)*

Jahangirnagar University, Savar, Bangladesh.

Project: Assessment of land use and land cover change of Bhawal National Park, Gazipur, Dhaka.

Work and Research experience

Teaching Assistant | The University of Texas at Dallas, USA *(August 2020 – May 2025)*

- Assisted students in solving lab exercises and discussed common mistakes in class to improve their understanding.
- Collaborated with the professor to create instructional videos on R and R Markdown, covering document formatting, package installation, and software setup.
- Edited and recorded videos using Camtasia.
- Served as an instructor for an online course, posting weekly video lectures, conducting class sessions, managing group projects, and handling assignments.

Graduate Field Instructor | Summer Field Institute, Department of Geospatial Information Sciences, The University of Texas at Dallas *(May 2024)*

- Collaborated with graduate and undergraduate students to conduct UAV-based data collection for agricultural mapping.
- Provided field supervision, technical instruction on drone operations, and assisted in data processing and image analysis.

Research Consultant (Remote) | ICIMOD, Nepal *(February 2020 - May 2020)*

- Conducted land cover classification using satellite imagery, collaborating with ICIMOD and the Forest Department of Bangladesh
- Classified natural and cultivated vegetative areas, water bodies, and artificial surfaces based on image data.

Data Enumerator | Bangladesh Bureau of Statistics, Bangladesh. *(January 2018 - April 2018)*

- Conducted field surveys and collected household data using structured questionnaires
- Ensured accurate data entry and data integrity for national statistical analysis.

Teaching Experience

Teaching Assistant | The University of Texas at Dallas, USA *(August 2020 – May 2025)*

GIS Data Analysis Fundamentals (Fall 2021, Fall 2022), Advanced GIS Data Analysis (Spring 2022), Applied Regression (Fall 2023), Machine Learning for Socio-Economic and Geo-Referenced Data (Spring, 2023), Global Change and Its Challenges (Spring 2024), The Global Environment (Instructor, Summer 2024)

Skills

- Technical Skills:** GIS Software (ArcGIS, QGIS), Python, R, ArcGIS scripting, Google Earth Engine (Coding for geospatial analysis), Deep learning (Image classification), Remote Sensing (UAV data, satellite imagery), Machine Learning (geospatial and socio-economic data), Spatial Data Science (Geospatial data processing, analysis and visualization), Web Mapping (Internet mapping, data visualization).
- Soft Skills:** Research and academic writing, cross-disciplinary collaboration, teaching and mentoring, problem-solving, critical thinking.

Publication and Conferences

- Khan, R., Siddique, M. A. B., Chowdhury, Y. F., Ahmed, M. N., Ullah, A. A., Khan, M. H. R., ... & Idris, A. M. (2023). **Fluvial responses towards the tannery effluent: Tracing the anthropogenic footprints.** Environmental Pollution, 338, 122673.
- Chowdhury, Y. F. & Cummings A. R. (2025). **Evaluating the Influence of Environmental and Anthropogenic Factors on Apex Predator-Prey Dynamics in the Tropical Rainforests of Guyana.** Presented at the American Association of Geographers (AAG) Annual Meeting, Detroit, Michigan, USA.

Achievements

- Received National Science and Technology (NST) fellowship award for M.S. Thesis. in 2018.
- Received 2024 - 2025 Pioneer Student Research Grant Award in June 2024.
- Received 2025 Geospatial Information Science's Outstanding Teaching Assistant Award.

Certifications

- MultiCloud, DevOps & AI Challenge – The Cloud Bootcamp Certificate of Completion (March 2025)
- Graduate Teaching Certificate – Center for Teaching and Learning, UT Dallas

Workshops

- Spatiotemporal Innovation Workshop on Sentiment Analysis in Social Media Data
- Attended Applied hierarchical modelling (AHM) workshop for species distribution and abundance at Michigan State University in July 2024
- Spatial Data Science by ESRI

Professional Membership

- American Association of Geographers
- Gamma Theta Upsilon
- Cloud-Native Geospatial Forum