

Kazi Jihadur Rashid

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Research Interest: GeoAI | Earth Observation | Urban Environmental Modeling

Education

Florida State University , Tallahassee, FL, USA	
Ph.D. Student in Geography	2025 – Present
University of Chittagong , Chattogram, BD	
M.S. in Geography and Environmental Studies	2021
B.S. in Geography and Environmental Studies	2019

Experience

Florida State University	Tallahassee, FL, USA
Graduate Teaching Assistant (Instructor)	Jun 2026 – Present
Graduate Assistant in Teaching	Dec 2024 – May 2026
Bangladesh Red Crescent Society (BDRCS)	Dhaka, BD
Officer – Green Response (Disaster and Climate Risk Management)	Feb 2024 – Dec 2024
Center for Environmental and Geographic Information Services (CEGIS)	Dhaka, BD
Research Consultant (Remote Sensing)	May 2020 – Jan 2024
University of Chittagong	Chattogram, BD
Research Assistant	Mar 2019 – Apr 2020

Awards & Funding

Bangladesh Sweden Trust Fund Travel Grant , Ministry of Finance, BD	Feb 2026
FSU Geographical Society Travel Award (Only for FSG Conference)	Jan 2026
Geography Department First-Author Publication Award , FSU	Jun 2025

Publications

Under Review

- Chowdhury, S. I. A., Rashid, K. J., et al. GeoAI-based Post-Segmentation Quality Validation of Building Footprints via Spatial Feature Engineering.
- Rashid, K. J.**, et al. Measuring Spatial Patterns of Urban NO₂ and Its Land Cover and Infrastructural Indicators Using GeoXAI: A Case Study of the Dhaka Metropolitan Region.

Peer-Reviewed Journal Articles

- Hoque, A., Mahmud, A., Rashid, K. J., and Biswas, R. N. (2026). Assessing Spatial Variability of Boro Rice (*Oryza sativa* L.) Phenology Across Different Climatic Zones in Bangladesh Using Sentinel-1 and -2 Time Series Data. *Agricultural Research*. DOI:10.1007/s40003-025-00921-z
- Rashid, K. J.**, et al. (2025). Quantifying the Drivers of the Spatial Distribution of Urban Surfaces in Bangladesh: A Multi-Method Geospatial Analysis. *Remote Sensing*. DOI:10.3390/rs17122050
- Gao, X., ..., and Rashid, K. J. (2025). SAPC: A New Overland Flow Accumulation Algorithm with Enhanced Adaptability to Terrain Surface Variations. *Transactions in GIS*. DOI:10.1111/tgis.70054
- Tuli, R. D., Rashid, K. J., et al. (2025). Impact of Climatic Parameters on Spatiotemporal Variation of Air Pollutants Across Bangladesh. *Urban Climate*. DOI:10.1016/j.uclim.2024.102263

5. Islam, S., Rashid, K. J., et al. (2025). Wavelet and Remote Sensing-Based Analysis of Urban Heat Island (UHI) of Megacity Dhaka and Its Interaction with Changing Climate. *Theoretical and Applied Climatology*. DOI:10.1007/s00704-024-05294-x
6. **Rashid, K. J.**, et al. (2024). Vegetation Greening and Browning Trend and Their Physio-Climatic Drivers in Chittagong Division Using Geospatial Techniques. *Environment, Development and Sustainability*. DOI:10.1007/s10668-024-05505-5
7. Biswas, R. N., Rashid, K. J., et al. (2024). Implications of Jhau (*C. equisetifolia*) Forest Deforestation on Coastal Landscape Ecology and Climate Change Adaptation in Cox's Bazar, Bangladesh. *Ecological Frontiers*. DOI:10.1016/j.ecofro.2024.05.006
8. Biswas, R. N., Rashid, K. J., et al. (2024). Geomorphological Changes and Landscape Ecosystem Services Dynamics of the Bhasan Char Island in the Northern Bay of Bengal, Bangladesh. *Ocean and Coastal Management*. DOI:10.1016/j.ocecoaman.2024.107096
9. Biswas, R. N., ..., Rashid, K. J., et al. (2023). Effects of Rising Seas and Geomorphological Changes in the Islands of Northern Bay of Bengal. *Regional Studies in Marine Science*. DOI:10.1016/j.rsma.2023.103250
10. Islam, M. N., ..., Rashid, K. J., and Bartell, S. M. (2023). Modeling on Metamorphosis of the Old Brahmaputra River and Associated Impacts on Landscapes in the Central Bengal Basin in Bangladesh. *International Journal of Earth Sciences*. DOI:10.1007/s00531-023-02328-
11. Islam, M. Y., ..., and Rashid, K. J. (2023). Quantifying Forest Land-Use Changes Using Remote Sensing and CA-ANN Model of Madhupur Sal Forests, Bangladesh. *Heliyon*. DOI:10.1016/j.heliyon.2023.e15617
12. Akter, T., Rashid, K. J., and Rahman, M. A. (2023). Changes in Rainfall and Its Relationship with the Vegetative Environment in the Central-Coastal Region of Bangladesh. *Arabian Journal of Geosciences*. DOI:10.1007/s12517-023-11313-
13. **Rashid, K. J.**, et al. (2021). Spatiotemporal Changes of Vegetation and Land Surface Temperature in the Refugee Camps and Its Surrounding Areas of Bangladesh After the Rohingya Influx from Myanmar. *Environment, Development and Sustainability*. DOI:10.1007/s10668-020-00733-x

Book Chapters

1. Tuli, R.D., Rashid, K.J., Biswas, R.N. (2026). Urban Tree Canopy Mapping with Remote Sensing. In: Eslamian, S., Eslamian, F.A. (eds) *Encyclopedia of Smart and Green Cities*. Springer, Singapore. DOI:10.1007/978-981-96-1800-2_219-1 (*In Press*)
2. Ahmed, M., Rashid, K. J., and Toma, R. A. (2026). Integrating Geospatial Evidence into Urban Water Management: Lessons from Surface Water Dynamics in Dhaka, Bangladesh. In U. Chatterjee and A. I. Almulhim (Eds.), *Urban Waterscapes*. Springer Nature Switzerland. DOI:10.1007/978-3-032-20649-7_8
3. **Rashid, K. J.**, et al. (2025). Urban Heat Island Effects on the Thermo-Ecological Environment: A Case from Asian Mega-City Dhaka, Bangladesh. In *Sustainability and Urban Quality of Life: Research, Policy and Practice*. DOI:10.4324/9781003604358-23
4. Tuli, R. D., Rashid, K. J., and Akter, T. (2024). Impact Analysis of the 2022 Flood Event in Sylhet and Sunamganj Using Google Earth Engine. In *Application of Geospatial Technology and Modeling for River Basin Management*. DOI:10.1016/B978-0-443-23890-1.00003-7
5. **Rashid, K. J.**, et al. (2023). Exploring the Spatiotemporal Patterns and Driving Forces of Urban Growth in Dhaka Megacity from 1990 to 2020. In *Urban Commons, Future Smart Cities and Sustainability*. DOI:10.1007/978-3-031-24767-5_17

6. Islam, S., Alam, M. R., and Rashid, K. J. (2023). Identification of Potential Rooftops for Gardening and Contributions of RTGs to Improve the Socio-Economic Condition and Promote a Sustainable Urban Environment in Bangladesh. In *Urban Commons, Future Smart Cities and Sustainability*. DOI:10.1007/978-3-031-24767-5_22

Conference Presentations

1. **Rashid, K. J.** (2026). Land-Cover Trajectories and Long-Term Surface Warming Patterns in Florida. *Florida Society of Geographers 62nd Annual Meeting*.

Mentoring, Leadership & Service

Research Mentor, Undergraduate Research Opportunity Program (UROP), FSU Oct 2026 – Present
Project: *Evaluating Earth Observation Foundation Models Across Urban Environments*

Secretary, Graduate Researchers of Geography (GRG), FSU May 2026 – Present

Professional Memberships: American Geophysical Union (AGU) | American Association of Geographers (AAG) | American Society for Photogrammetry and Remote Sensing (ASPRS) | Florida Society of Geographers (FSG)

Technical Skills

Programming & Tools: Python, R, JavaScript, SQL

Geospatial Software: ArcGIS Pro, Google Earth Engine, ERDAS IMAGINE

Spatial Modeling & AI: GeoAI, machine learning, explainable AI, spatial statistics

Remote Sensing: Multi-spectral satellite analysis, land-cover dynamics, LST modeling