CURRICULUM VITAE

Arup Acharjee **Phone**: **+1 512 210 2888**
Doctoral Student and Teaching Assistant
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Educational Qualification

1. Ph.D. Student in Geographical Information Sciences (GIS) Program

Institution: Texas State University
Department: Geography and Environmental Studies
Major Courses: **1. Advanced Quantitative Methods 2. Geovisualization 3. Geocomputation 4. Teaching Geography 5. History and concepts in Geography 6. Technical Foundation and Methods in GIS**
Result: CGPA **3.90/4.00** (at present)

2. MS in Geography and Environment

Institution: Shahjalal University of Science and Technology, Sylhet, Bangladesh
Department: Geography and Environment
Graduation Year: October 2019- October 2021
Major Courses: 1. Natural Hazards and Disaster Management 2. Water resource management 3. Advanced GIS and Remote Sensing 4. Coastal and Marine Environment 5. Regional planning and development 6. Biodiversity and Conservation

3 Bachelor of Science in Geography and Environment

Institution: Shahjalal University of Science and Technology, Sylhet, Bangladesh
(www.sust.edu)
Department: Geography and Environment
Graduation Year: September 2019
Major Courses:
1. Geomorphology I 2. GIS I, II, and III Principles of Geographical Information System
3. Biogeography 4. Oceanography
5. Climatology I 6. Quantitative Technique in Geography and Environment
7. Urban Geography and Planning 8. Climatology II

9. Geomorphology 10. Agricultural Geography
11. Political Geography 12. Principles of Remote Sensing and Image Interpretation
13. Resource Management 14. Environmental and Social Impact Assessment
15. Agricultural Geography 16. Environmental Management
17. Hydrology and Fluvial Morphology 18. Environmental Analysis

Thesis: Ecological risk assessment of heavy metal in the bottom sediment of River Surma, Bangladesh using Monte Carlo simulation and multivariate statistical analysis
Supervisor: Zia Ahmed
Geography and Environment, Shahjalal University of Science and Technology, Sylhet, Bangladesh
Result: CGPA 3.60/4.00 (3.72/4.00 after course-by-course evaluation by WES)

Technical Skills

Hands-on Techniques: Heavy metal concentration analysis by atomic absorption spectrophotometer, lab analysis of dissolved oxygen, BOD test, pollen and diatom testing in soil and sediment, Plain Table Surveying, and Total station surveying.
Data Analysis: Python, SPI, SEPI, ERDAS Imagine, ArcGIS Pro, ESRI Dashboard, GitHub, Google Earth Engine, Network Analyst, See5, Cubist, Spatial Analyst, MATLAB, QGIS, Model Builder.
Statistics: R studio, Excel, SPSS
Word processing: MS Office
CODING AND SCRIPTING LANGUAGES: Basic HTML and CSS, ArcGIS JavaScript API, ArcPy, SQL.

Publications

Peer-reviewed Journal (Total Citations- 99 in Google Scholar)

1. **Acharjee, A**.; Ahmed, Z.; Kumar, P.; Alam, R.; Rahman, M.S.; Simal-Gandara, J. Assessment of the Ecological Risk from Heavy Metals in the Surface Sediment of River Surma, Bangladesh: Coupled Approach of Monte Carlo Simulation and Multi-Component Statistical Analysis. Water 2022, 14, 180. https://doi.org/10.3390/w14020180
2. Purbita Saha Katha, Zia Ahmed, Rafiul Alam, Badhan Saha, **Arup Acharjee**, M. Safiur Rahman, Efficiency analysis of eggshell and tea waste as Low-cost adsorbents for Cr removal from wastewater sample, South African Journal of Chemical Engineering, Volume 37, 2021, Pages 186-195, ISSN 1026- 9185
3. Ahmed, Zia & Alam, Rafiul & Basak, Rony & Rezoan, Hafiz & **Acharjee, Arup**. (2021). Spatio-temporal analysis of heavy metals in the sediment of lower Meghna River using contamination indices, multivariate statistics, and GIS techniques. Environmental Earth Sciences. 80. 10.1007/s12665-021- 09997-6.

Other research experiences

4. Student Researcher - March 2018 - July 2018
Shahjalal University of Science & Technology, Sylhet, Bangladesh.

Partaken on research titled as “Comparative Study on the Offshore Islands of Bangladesh; A Case Study of Kutubdia, Maheshkhali, Sonadia and Saint Martin’s Island.” Completed designated tasks with efficiency and accuracy to support research objectives. Identified geomorphological differences among these offshore islands of Bangladesh.

5. Student Researcher - April 2017 - September 2017
Shahjalal University of Science & Technology, Sylhet, Bangladesh.

Participated in research titled as “Impacts of Disasters in The Coastal Region of Bangladesh; The Case of Kuakata, Patuakhali.” Worked with SPSS 16, Microsoft Office 2016 and ARCGIS 10.3 to analyze, document and manage milestones and project requirements.

Professional Experience

1. **Teaching Assistant**
   Institution: Texas State University, TX, 78666, USA.
   Department: Geography and Environmental Studies
   Period: August 2022 – present
   Courses Taught: **Physical Geology (lab) GEOL 1410, Historical Geology (lab) GEOL 1420**
2. **Research Assistant**
   Institution: Shahjalal University of Science and Technology, Sylhet, Bangladesh
   (www.sust.edu)
   Department: Department of Geography and Environment
   Period: August 2019 – July 2020

Awards and Scholarships

- **Gowen’s Merit Fellowship**, Texas State University, TX, USA

- **The Bernard W. Detlefsen Doctoral Excellence Scholarship**– PhD Scholarship, Department of Geography and Environmental Texas State University, TX, USA.
- Graduate College Scholarship, Texas State University
- Doctoral Retention Scholarship

RESEARCH INTEREST

- Application of Machine learning and GEO AI in health geography, environmental epidemiology
- Spatial Data Mining
- Application of GIS techniques in the location-allocation analysis of infrastructures
- Geography of natural resources and management
- Environmental pollution studies

Extra-Curricular Activities

- Winner of Pool Tournament arranged by LBJ Student Center at Texas State University
- Executive member, Green Explorer Society, Shahjalal University of Science and Technology
- Landscape photography enthusiast.

PROFESSIONAL MEMBERSHIP AND AFFILIATIONS

- American Association of Geographers (AAG)