




CURRICULUM VITAE


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Academic Credentials

Bachelor of Science in Geography and Environmental Studies

University of Chittagong, Chittagong, Bangladesh

CGPA: 3.32 / 4.00

February 2016 – October 2021

Research Interests

GIScience, GEOAI, AI, Spatial Data Science, Spatio-temporal Data Mining, Spatio-temporal modelling, Social Sensing, Human Mobility, Natural Hazards, Climate Change

Publications

Refereed Publications

1. **Hridoy, A. E. E.**, Mohiman, M. A., Tusher, S. M. S. H., Nowraj, S. Z. A., & Rahman, M. A. (2021). Impact of meteorological parameters on COVID-19 transmission in Bangladesh: a spatiotemporal approach. *Theoretical and Applied Climatology*, 1-13.
2. **Hridoy, A. E. E.**, Tipo, I. H., Sami, M. S., Babu, M. R., Ahmed, M. S., Rahman, S. M., ... & Naim, M. (2021). Spatio-temporal estimation of basic and effective reproduction number of COVID-19 and post-lockdown transmissibility in Bangladesh. *Spatial Information Research*, 1-13
3. Alam, E., **Hridoy, A. E. E.**, & Naim, M. (2021). Factors Affecting Small-Scale Fishers Adaptation toward the Impacts of Climate Change: Reflections from South Eastern Bangladeshi Fishers. *International Energy Journal*, 21(1A)

Preprints

1. **Hridoy, A. E. E.**, Naim, M., Emon, N. U., Tipo, I. H., Alam, S., Al Mamun, A., & Islam, M. S. (2020). Forecasting COVID-19 Dynamics and Endpoint in Bangladesh: A Data-driven Approach. *medRxiv*.
2. **Hridoy, A. E. E.**, Naim, M., Alam, E., Emon, N. U., Tipo, I. H., Tusher, S. M. S. H., ... & Islam, M. S. (2020). Estimation of Effective Reproduction Number for COVID-19 in Bangladesh and its districts. *medRxiv*.

Submitted

1. Title: Climate Change in Bangladesh: Temperature and Rainfall Climatology of Bangladesh for 1949–2013 and its implication on rice yield (**Under Review**). Article: Meteorology and Atmospheric Physics.
2. Title: Impacts of storm surges in society and recent advances on risk management (**Under Review**). Book Chapter: Environmental Hazards (Taylor and Francis).
3. Public Confidence in COVID-19 Prevention and Response in Bangladesh (**Major revision**) Journal: Frontier in Public Health.

Presentation

Delivered an oral presentation entitled “Tracing spatial and temporal dynamics of the air quality of the Red Sea based on satellite observations” in conference on the Environment and Biodiversity of Red Sea on March 31, 2021.

Research and Professional Experience

Data Science Instructor, Institute of Forestry and Environmental Science,
University of Chittagong, Chittagong, Bangladesh

October 2021- present

Conducting a course on Python, data analysis, machine learning algorithms. Over 60 learning enthusiasts enrolled in this course.

Programming Instructor , Bangladesh Agriculture University and Bangladesh and King Fahd of Petroleum & Minerals, Saudi Arabia Conducted an online course on Python programming language, data analysis and statistical modelling in Python.	June 2021 – July 2021
Research Assistant I'm working for Dr. Syed Masiur Rahman, who is a Research Engineer at Center for Environment & Marine Studies, Research Institute, King Fahd University of Petroleum & Minerals. I have been involved in couple of research projects.	January 2021 – Present
Research Assistant , Disaster and Development Organizations (DADO), Chattogram, Bangladesh (www.dadobd.org) My research focuses were climate change, climate change adaptation and natural disasters.	June 2019 – December 2020
Frontend Developer , Aqius consulting, Melbourne, Victoria, Australia Remote Frontend developer. My responsibilities were to develop websites using web technologies.	June 2018 – December 2018
Frontend Web Developer , Fiverr	February 2017- May 2018

Technical Skills

Languages: Python, JavaScript, R
Data Science Tools: Scikit-Learn, SciPy, TensorFlow, Pandas, NumPy, Matplotlib
Deep learning: TensorFlow, Keras
GIS Tools: Quantum GIS (QGIS)
Spatial Data Science tools: Geoda, PySal, GeoPandas, Leaflet, POSTGIS
Database Languages: SQL, Big Query, MongoDB
Remote Sensing tool: Google Earth Engine (GEE)
Web Programming: HTML, CSS, jQuery, React, Leaflet.js

Volunteer COVID-19 Response

1st COVID-19 Dashboard and Modelling in Bangladesh

Developed first COVID-19 tracker and dashboard in Bangladesh named www.bdcovid.com (**domain expired**). Daily updating, choropleth and cluster map of country-level COVID-19 incidences and first Interactive SEIR based epidemiological modelling of COVID-19 in Bangladesh. Launched on April 14, 2020

COVID-19 dashboard: <https://git.io/J2lAF>

Others COVID-19 related works

Predicting COVID-19 transmission in Bangladesh using human mobility data: machine learning approach.

- <https://git.io/J2lb4>

Sentiment Analysis of Public Opinion on Vaccination in Bangladesh using Twitter data.

- <https://git.io/J28Vk>

Post-lockdown transmissibility of COVID-19 in Bangladesh.

- <https://git.io/JVGnG>

Invited Talk

Shared my COVID-19 modelling experience with Dr. Shaun Truelove (Associate Scientist, John Hopkins University, USA) for training on “COVID-19 epidemiology and modeling in the Humanitarian Setting” on December 10, 2020. **See** <https://youtu.be/DDw9RmIt0PY>

References

Dr. Syed Maisur Rahman (Research Supervisor)
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 Institute of Forestry and Environmental Science, University of Chittagong, Chittagong, Bangladesh
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