

# PRITAM KARMAKAR RONY



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## Education

### ENVIRONMENTAL ENGINEERING

Studying Master's in Science

Texas A&M University - Kingsville, Kingsville, Texas, USA

### CIVIL AND ENVIRONMENTAL ENGINEERING

Bachelor in Science (Engineering)

Shahjalal University of Science and Technology, Sylhet, Bangladesh

CGPA: 3.25/4.00 | May 2023

## Experience

### RESEARCH ASSISTANT

Dept. of Environmental Engineering

Texas A&M University - Kingsville, Kingsville, Texas, USA

June 2024-Present

### RESEARCH CONSULTANT

River, Delta and Coastal Morphology Division

Center for Environmental and Geographic Information Services (CEGIS), Dhaka, Bangladesh

June 2023-May 2024

### RESEARCH ASSISTANT

Dept. of Civil and Environmental Engineering

Shahjalal University of Science and Technology, Sylhet, Bangladesh

April 2021-May 2023

- Have done 1D and 2D models in HEC-RAS
- Have done 3D model in Delft3d
- Perform different Hydrodynamic Analysis
- Have done Frequency Analysis Study using Statistical Software
- Check the Impact of Dredging in Surma River

## Research Interest

- Hydrodynamic/Hydrologic/Hydraulic Modelling
- River/Delta/Coastal Morphology
- Coastal Modelling, Coastal Oceanography and Sediment Analysis
- Climate Change, Prediction and Mitigation
- Application of integrated technique of Remote Sensing and GIS
- Development of Advance Flood Forecasting System
- Hydroclimatic dynamics and its application to the design of water and infrastructure systems
- Probabilistic forecasting and Machine Learning
- Natural Hazards, Disaster Resilience
- Transport and Fate of Sediment and Nutrients
- Air, Water Quality Prediction

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## Computational Skills

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### MODELLING TOOLS

HEC-RAS, Delft3D, SWMM, SOBEK.

### MAPPING AND DRAWING TOOLS

Arc-GIS, AutoCAD

### PROGRAMMING TOOLS

Python, C++, Google Earth Engine

### TYPESETTING AND STATISTICAL ANALYSIS TOOLS

MS Word, MS Excel, SPSS, MS Power-Point

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## Manuscript Published

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Pritam Karmakar Rony, Md. Misbah Uddin, Gazi Md. Riasat Amin, Dr Gulam Md. Munna, Dheeman Das Dibya; Assessment of dredging impact on Hydrodynamics of Surma River using Hydrodynamic model: HEC-RAS approach. Water Practice and Technology 2023; wpt2023092. doi: <https://doi.org/10.2166/wpt.2023.092>

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## Manuscript under Work

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- **Pritam Karmakar Rony & Hossain, S.**, n.d. Rainfall Prediction of Sylhet District in Bangladesh using Different Methods of Machine Learning.
- A Machine Learning Approach to Predict Air Quality of Sylhet City in Bangladesh
- Building Storm Surge Model and Finding Vulnerable Points on Delaware Bay

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## Manuscript under Review

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- Md. Misbah Uddin, Md. Saifur Rahman Shochib, Md. Abid Hasan, **Pritam Karmakar Rony**, Prediction of water quality index in surma River using artificial neural network model. Water Practice and Technology 2024

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## Conference paper Accepted

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Pritam Karmakar Rony et al., 2023. Assessment of Dredging Impact on Hydrodynamics of Surma River using Mathematical Model. Dhaka, International Conference of Water and Flood Management.

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## Project Work On-going

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- Monitoring and Analysis of Sediment and Nutrients and their Associated Pollutant Loads

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## Training Done

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Capacity Development on Integrated Application of GIS and Remote Sensing

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## Volunteer Experience

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1. Former Organizing Secretary, Dept. of Civil and Environmental Engineering, SUST.
2. Former School Coordinator, Swapnotthan, A voluntary organization for unprivileged children, SUST.
3. Former Publicity Secretary, Dept. of Civil and Environmental Engineering, SUST
4. Volunteer to help the Flood affected people