Md Salman Rahman

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EDUCATION

Chittagong University of Engineering and Technology — *Bangladesh*
B.Sc. in Civil Engineering with Honors, CGPA: **3.84/4.00** — *July 2018*
Class Rank: Summa Cum Laude (2nd in a class of 126 students)

RESEARCH INTERESTS

Machine Learning, Deep Learning, Reinforcement Learning, Computer Vision, Intelligent Systems, Computational Sustainability, Remote Sensing, and Optimization.

PUBLICATIONS

Journal

[J1] **Md Salman Rahman**, Nahian Ahmed, Md Sarfaraz Goni Adnan, Fazle Rabbi, Bayes Ahmed, Zhijun Qiao, Rushedul Haque. Machine Learning Approach for Landslide Prediction and Susceptibility Mapping (Under review in Remote Sensing, Impact Factor : 4.118).

[J2] Tamal Chowdhury, Hemal Chowdhury, **Md Salman Rahman**, Monirul Islam Miskat, Nazia Hossain, Piyal Chowdhury, Sadiq M. Sait. Progress of Solar Energy Application in Bangladesh, Techno-economic Analysis and Implementation of Artificial Intelligence (Under review in Utilities Policy, Impact Factor : 1.835).

[J3] Tamal Chowdhury, Hemal Chowdhury, **Md Salman Rahman**, Monirul Islam Miskat, Piyal Chowdhury, Sadiq M. Sait. A Review of the Hydropower Production Potential in Bangladesh to Encounter the Energy Requirements (Under review IEEE Access, Impact Factor : 4.098).

[J4] Md Reaz Akter Mullick, **Md Salman Rahman**, Md Panjarul Haque. More Crops Whilst Saving Drops Using an Optimization Model – a Case from Bangladesh (Under review in Irrigation and Drainage, Impact Factor : 1.027).

Book Chapter

[BC1] Tamal Chowdhury, Hemal Chowdhury, Pranta Barua, **Md Salman Rahman**, Piyal Chowdhury, Nazia Chowdhury. Bioenergy Production from Food Waste and Machine Learning Application.

[BC2] Tamal Chowdhury, Hemal Chowdhury, Monirul Islam Miskat, **Md Salman Rahman**, Piyal Chowdhury, Nazia Chowdhury. Membrane Based Hybrid Processes for Wastewater Treatment.

Conference Abstract

[CA1] **Md Salman Rahman**, Md Reaz Akter Mullick, Panjarul Haque, Nadia Sultana Nisha. Effect of Climate Change to Irrigation Water Requirement in an Irrigation Project of Bangladesh. In American Geophysical Union (AGU) Fall Meeting in San Francisco, USA (December 2019). [Link]

[CA2] Emon Roy, **Md Salman Rahman**, Nadia Sultana Nisha. Climate Change Induced Disaster and Adaption Strategy at Coastal Region of Bangladesh: a Case Study on Saint Martin Island. In American Geophysical Union (AGU) Fall Meeting in San Francisco, USA (December 2019). [Link]

[CA3] **Md Salman Rahman**, Rupom Kanti Dhar, Md Reaz Akter Mullick. Seasonal Weather Prediction for Bangladesh Based on ENSO Condition. In American Geophysical Union (AGU) Fall Meeting in San Francisco, USA (December 2019). [Link]

[CA4] **Md Salman Rahman**, Nadia Sultana Nisha. Sustainability Impact on Bangladesh Due to Influx of the Rohingya Immigrants. In International Conference on the Rohingya Crisis in Comparative Perspective, UCL Institute for Risk and Disaster Reduction, University College London, UK (July-2019). [Link]

Others

[O1] Emon Roy, **Md Salman Rahman**, Nadia Sultana Nisha, Amlan Barua. Water Vulnerability Scenario of a Typical Populous City of Least Developed Country. In 5th International Conference on Civil Engineering for Sustainable Development (ICCESD 2020).

[O2] **Md Salman Rahman**, Sultan Mohammad Farooq, Md Aftabur Rahman. Improvement of Soft Soil by Physical and Chemical Interaction. In 4th International Conference on Advances in Civil Engineering (ICACE 2018).

WORKING PAPERS

- Tackling Future Climate and Energy Challenges with Machine Learning.
- Spatio-temporal Analysis of Women Empowerment Index, Low Birth Weight and Malnutrition
- Environmental Sustainability Aspect of Ground Improvement Material.

SERVICES

Journal Reviewer [ORCiD]

- Water Resources Management

AWARDS

- Presidential Graduate Research Assistantship for Masters Study 2020
- Dean's List Award for Academic Excellence at All Levels of Undergraduate Study, Bangladesh. 2018
- University Merit Scholarship for Academic Excellence at All Levels of Undergraduate Study. 2014-2018
- High School Scholarship Awarded by Government of Bangladesh. 2008
- Primary School Talent Pool Scholarship Awarded by UNICEF & Government of Bangladesh. 2005

RELEVANT COURSEWORK

Undergraduate Courses (Summary)

- Courses in Engineering Mathematics (Differential & Integral Calculus, Vector Algebra, Differential Equations, Matrices, Vector Calculus, Laplace & Solid Geometry, Spherical Trigonometry, Fourier Analysis & Harmonics), Programming, and Basic Science.
- Courses Related to Sustainability, Sustainable Cities & Community Development, Hydrology, Sustainable Agricultural System, Intelligent Transportation system, and Advancement Towards Sustainable Development.

TECHNICAL SKILLS

Languages: PYTHON, C++, R, MATLAB, OCTAVE, C, Java.
Frameworks: Tensorflow, PyTorch, Flask, Keras, Django, REST Api, Bootstrap.
Libraries: Numpy, Scikit-learn, Seaborn, Pandas, Matplotlib, SciPy.
Statistics: R, IBM.
Database: MySQL.
Remote sensing: ArcGIS, Google Earth Engine, R.
Data Structures and Algorithms: Familiar with concepts used in data mining and machine learning.
Others: Data analysis using Python & R, Google Colab, IBM Watson Studio, IBM Developer Skills Network Labs, Jupyter & Zeppelin Notebook.

REFERENCE Available upon request