

APALA MAJUMDER



Preface: A dedicated engineering postgraduate seeking a research opportunity in the field of climate and water resource engineering at a renowned institution.

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WORK EXPERIENCE

2021: **Environmental Engineer – Climatology** at TerraSustain

- Climate modelling and risk assessment for a multi-national consultancy firm.

EDUCATION

GATE Score: 538 (CE – 2018)

July 2018 – May 2020	National Institute of Technology, Rourkela M.Tech in Water Resource Engineering (Civil) DGPA: 8.28
July 2014 – May 2018	Maulana Abul Kalam Azad University of Technology, Kolkata Meghnad Saha Institute of Technology, Kolkata B.Tech in Civil Engineering DGPA: 8.37
2014	The West Bengal Council of Higher Secondary Education Rahara Bhabanath Institution for Girls, Khardah 12 th (Pure Science) score: 74.8%
2012	The West Bengal Board of Secondary Education Rahara Bhabanath Institution for Girls, Khardah 10 th score: 89.4%

PROJECTS

M.Tech Dissertation:

- **Use of Markov Chain Model for Prediction of LU-LC and Determination of Water Balance in Jaraikela Region, Odisha**

Under the supervision of Dr. Kanhu Charan Patra, July 2019-20

- **Methods:**

- **Maximum Likelihood Estimation** – for combined classification
- **Muskingum Method of Routing** – for Rainfall-Runoff simulation
- **CA-Markov Chain Model** – Future Prediction of LU-LC

- **Software Used:**
 - **ArcGIS, ERDAS Imagine** – Used for performing Combined Classification for calculation in LU/LC change
 - **HEC-HMS** – Used for following the Muskingum Method of routing for calculation of water balance.
 - **SWAT** – Used for Watershed Delineation.
 - **TerrSET** – Used for Future Prediction of LU/LC

- **Project Description:**
 - This work presents a supervised classification and accuracy assessment of LU/LC satellite data, and rainfall-runoff simulation using SCS-CN.
 - Skills in remote sensing and data forecasting using satellite images were acquired in this work.
 - The present work leaves a wide scope for future investigators to explore many other aspects of climate change uncertainty and risk assessment.

B.Tech Projects:

<ul style="list-style-type: none"> • Respiratory Health and Air Quality Related Health Symptoms in an Institute in Kolkata <p>January 2018 – May 2018</p>	Under the guidance of Prof. Biswajit Thakur Meghnad Saha Institute of Technology
<ul style="list-style-type: none"> • Design of Sewer Pipe and Network in an Area of Kolkata <p>August 2017 – December 2017</p>	Under the guidance of Prof. Biswajit Thakur Meghnad Saha Institute of Technology
<ul style="list-style-type: none"> • Study of Orientation of Ancient Sun Temples in India <p>February 2017 – May 2017</p>	Under the guidance of Prof. Biswajit Thakur Meghnad Saha Institute of Technology

COURSES AND CERTIFICATIONS

1. **Stochastic Hydrology – IISC Bangalore via NPTEL**
 2. **ArcGIS Desktop for Spatial Analysis – Udemey Certification**
 3. **ArcSWAT Model with ArcGIS – Udemey Certification**
 4. **Probability and Statistics – Udemey Certification**
 5. **Data Science & Machine Learning with R – Data Perian via Udemey**
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SKILLS

• Software Skills	
Modelling Software	AutoCAD, ArcGIS, SWAT, ERDAS Imagine, SWMM, HEC-HMS, HEC-RAS, TerrSet
Statistical Analysis Software	R, MATLAB, Python
Application	MS Office Suite
System	Windows

TRAININGS

• Larsen & Turbo Duration: 30 days (2017)	Industrial Training on Flyover Design
• Kolkata Metropolitan Development Authority Duration: 30 days (2016)	Industrial Training on Sewage Treatment Plant and Sewer Design

AWARD

- **Second Position in Scintillations 2017**
A prototype making competition organized by the incubation cell of IEST, Shibpur
Prototype Title: *Light Weight Reinforced Concrete Brick*

INTERESTS

Research	Stochastic Hydrology, Climate change, Flood analysis, Water Resources Management, Remote Sensing
Subject	Civil Engineering, Statistical Analysis, Data Science
General	Badminton, Tennis, Swimming

LANGUAGES

English, Hindi, and Bengali