

# NILADRI CHOWDHURY

Telephone : (+91) 8013800772

Date of Birth : 11/01/1995

Mail: niladri12chowdhury@gmail.com

Kolkata, India

Linkedin profile: [linkedin.com/in/niladri-chowdhury-b797311b4](https://www.linkedin.com/in/niladri-chowdhury-b797311b4)

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## EDUCATION

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**Master of Technology in Civil Engineering** 2019-2021

**Specialization: Environmental Engineering**

Indian Institute of Technology Guwahati, India

**Final GPA: 8.13/10**

**Bachelor of Technology in Civil Engineering** 2015-2018

Jadavpur University Kolkata, India

**Final GPA: 6.56/10**

**Diploma in Civil Engineering** 2012-2015

Jnan Chandra Ghosh Polytechnic, India

**Final marks : 81.7%**

**Higher Secondary Examination (WBCHSE)** 2012

Jadavpur Vidyapith Higher Secondary School, Kolkata, India

**Marks: 72.8 %**

**Secondary Examination (WBBSE)**

Jadavpur Vidyapith Higher Secondary School, Kolkata, India 2010

**Marks: 77.8%**

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## RESEARCH EXPERIENCE

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**Master's thesis : Assessment of Ground Water Quality of Three Districts of Assam by GIS Mapping.** May 2020 -July2021

*Advisor: Prof. Ajay Kalamdhad (Department of Civil Engineering, IIT Guwahati)*

*Co-advisor: Prof. Bimlesh Kumar (Department of Civil Engineering, IIT Guwahati)*

*Description :*

**Groundwater sample collection and laboratory analysis:** Sample points were selected in the study areas according to their size and studying topography by LULC map. 20 parameters were analyzed for pre-monsoon and post-monsoon.

**Statistical and numerical modeling with analyzed data:** Assessment was done for drinking and irrigation aspects. The tools I used for modeling are two novel indices( Information entropy, Multivariate statistical-based) approach, bivariate and multivariate analysis(factor analysis, cluster and Discriminant analysis) analysis, heavy metal assessment, health risk assessment.

**Plots and Maps:** The variability of different secondary parameters, contaminants, and indices are shown by GIS mapping. For Irrigation purposes, four essential plots (USSl, Wilcox, Piper, Durov) were generated.

**Treatment of pulp and paper industry wastewater and design of treatment plants.**

*July –November 2020*

*Advisor: Prof. Mohammed Jawed (Department of Civil Engineering, IIT Guwahati)*

*Description:* Potential removal of BOD, COD, AOX, Nitrogen, Phosphorus from “produced water” by chemical precipitation and biological treatment by Activated Sludge process..

**Co-digestion of intraterrestrial weeds and cow dung for biogas production and finding optimum F/M ratio.**

*January – May 2020*

*Advisor: Prof. Ajay Kalamdhad ( Department of Civil Engineering, IIT Guwahati)*

*Description :* A case study was performed to evaluate the biomethane potential (BMP) by mixing two types of weed generated in IIT Guwahati campus and Cowdung.

**Study of Performance of Horizontal Subsurface Wetland for Municipal Sewage of Sapuipara Canal, Kolkata, India .**

*August 2017 – Jan 2018*

*Advisor :*

*Prof. Pankaj Kumar Roy. (School Of Water Resource Engineering, Jadavpur University)*

*Prof. (Emeritus) Arunabha Majumder, (School Of Water Resource Engineering, Jadavpur University )*

*Description :* A bench-scale study on the performance of constructed wetland was conducted and 12 essential parameters were considered for studying the removal efficiency. According to the removal efficiency of wastewater quality parameter and it showed good performance with parallel to other wastewater treatment processes.

**Internship: Assessing sea surface temperature by multivariate statistical analysis.**

*June -July 2017*

*Advisor : Dr. Arpita Mondal (Associate Professor, IIT Bombay)*

*Description :* Studied multivariate statistical analysis (factor analysis., cluster analysis) and incorporating the knowledge in modeling by MATLAB.

**Workshop: Applications of GIS and Remote Sensing in Water Resources Engineering (AGARSWRE 2021), Civil Engineering Department, Sardar Vallabhbhai National Institute of Technology (SVNIT) Surat, India.**

*March 2021*

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## RESEARCH INTEREST

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- Surface and subsurface hydrology and modeling.
- Geochemistry
- Groundwater-Surface water interaction.
- Environmental assessment and monitoring.

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## ACADEMIC ACHIEVEMENTS

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- Joint Entrance/ (JELET) Examination 2015: State rank 3rd among 1.56 lakhs of participants.
- Secured 95.3 percentile in the Graduate Aptitude Test in Engineering 2019 (GATE'19)
- Recipient of GATE Scholarship conferred by the Ministry of Human Resource Development, Government of India for pursuing Masters of Technology at IIT Guwahati

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## KEY COURSES

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- Process Chemistry for Water and Wastewater Treatment
- Biological Processes in Environmental Engineering
- Air and Noise Pollution
- Optimization Methods
- Industrial Wastewater Pollution Control
- Air Quality Modelling
- Solid and Hazardous Waste Management
- Physico-chemical processes in Environmental Engineering
- Design of Environmental Engineering Systems
- Groundwater hydrology and water conservation
- Hydrology

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## SOFTWARE AND PROGRAMMING LANGUAGES

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MATLAB, Python, ArcGIS , IBM SPSS , Grapher, Aquachem, AutoCAD, MS Office (Word, Excel, Power point).

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## LANGUAGE SKILL

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- Bengali
- English  
*Test: IELTS*  
*Score: 7.0*  
*Test date: 27.11.2021*
- Hindi

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## ACTIVITY AND ORGANIZATIONS

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- **Black belt** in Martial art (1st Dan), 2017
- **Bronze Medal** in 10th All India Kanshinkai Shotokan Karate Championship, 2018
- Photography ( Member of Jadavpur University Photography Club(JUPC), 2016-2018)
- Worked as Event Photographer in Jadavpur University Quiz Club (Annual Event, QURIOSITY, 2018)
- Event Photographer in International Conference, RECYCLE 2020, IIT Guwahati
- Basic Rock Climbing course (JUMHC), 2016
- Advanced Rock Climbing Course ( Sonarpur Arohi Club, 2018)
- Working as a Volunteer in “**Mithila Wildlife Trust**” **Nepal**: It is situated in Dhanusadham Protected forest, Nepal. My main job was to build a school for 200 children with natural resources. My other jobs were photographer (documenting), Assist wildlife rescue operations and teaching. Duration: 1 month, 2017
- Working as a Volunteer in “**Kusum Rural Welfare Society**” **India**: It is in Kolkata. My main job was to teach children. Besides teaching, I used to organize sports events. Duration: 6 months.
- Working as a digital artist since 2020.
- Yoga : Course was done in 2021 from Department of Physical Education, Belda College.
- Circket : Played up to under 19 in Sonarpur Sporting Club and in the school team.