Ajoy Karmakar

Education Indian Institute of Remote Sensing, India

Aug 2023-June 2025

Master of Technology in Remote Sensing & GIS

Specialization: Forest Resources and Ecosystem Analysis

Dissertation: Impact of Fire on Carbon Flux in North Western Himalaya

Advisor: Dr. Taiabanganba Watham

Sidho-Kanho-Birsha University, WB, India

Aug 2021-June 2023

Master of Science in Environmental Science

Specialization: Remote Sensing

Dissertation: Assessing the anthropogenic and Climate Change Drivers in Shaping Landscape

Advisor: Dr. Tarakeshwar Senapati

Bankura Sammilani College, WB, India

Aug 2018- July 2021

Bachelor of Science in Zoology Programme

Dissertation: Waterbody Assessment using Water Quality Index and Zooplankton Diversity

Advisor: Dr. Surajit Majumder

Research

Measurements and modeling of Carbon and Hydrological Flux:

Interests

Tower mounted eddy covariance, time-frequency analysis of land-atmosphere interactions, Remote Sensing

Reserach Experience

Junior Research Fellow

July 2025-present

Experience G. F.

G. B. Pant National Institute of Himalayan Environment, India

Project: Carbon Budget and Eco-hydrological Dynamics of Selected Himalayan High-altitude

Grasslands and Their Carrying Capacity PI & Advisor: Dr. Sandipan Mukherjee

Conducting field campaigns, analyzing flux tower eddy covariance data, and contributing to land-atmosphere coupling research

• Maintaing Flux Tower

• Flux Tower Data Analysis

Post Graduate Researcher

July 2024–June 2025

Indian Institute of Remote Sensing, India

Conducted field visits, data collection, analyzed eddy covariance flux data

Research Intern

April 2023 – June 2023

CSIR - Central Mechanical Engineering Research Institute, India

Worked on Plastic Pyrolysis and Gas Chromatography.

Programming : Python, Bash, Julia

Models : CESM-CLM, CliMA Land, LUE

Skills Remote Sensing & GIS: ERDAS Imagine, ENVI, 3D Forest, SNAP, ArcGIS, QGIS

Software and Tools : GEE (Python & JS), Linux, GrADS, CDO, LaTeX, MS Office Others : Flux Tower Maintenance & Data Handling, Sap Flow Meter

Publications

Assessing the waterbodies through water quality index and zooplankton diversity for environmental sustainability of Bankura, West Bengal, India. 2024

Mahanty S, Saha D, **Karmakar A**, et al. AGBIR. 2024;40(2):1021-1029.

Professional

Project Intern

Feb 2025- April, 2025

Experience

Equatior Geo PVt. Ltd., India

Projects: the Race to Net Zero

Contributed with Remote Sensing and GIS with the related project

• Google Earth Engine

• Carbon & Other GHGs

RS-GIS Intern

Oct 2023- Dec 2023

Stand For Forests Foundation, India

Contributed with RS & GIS in Various Project

Achievements

Qualified Graduate Aptitude Test in Engineering (GATE)

2024 & 2025

Subject: Geomatics Engineering (GE)