



# Arpan Basu

Honors student with academic success, known for quick learning and cross-department collaboration. Skilled in full-stack development, data science, and machine learning. Developed IT solutions like an Emergency Doctor's Dashboard and a Facial Mood Detection system. Proficient in Python, SQL, Java, web technologies, remote sensing, and data analytics.

## Internships

### ○ 03/2024-08/2024

#### Innovation & Entrepreneurship Development Cell (CSE)

##### Research Assistant

- A project to evaluate various vegetation indices and identify the most suitable ones for studying seasonal trends in mangrove ecosystems.
- Studied and proved MVI and MFI superiority over other vegetation indices for the region of Henry's Island, West Bengal, using MODIS(MYD13Q1) dataset.
- Work will be published in PEIS 2024 Conference.

### ○ 01/2024-02/2024

#### CK Birla Hospitals, India

##### Information Technology Intern

- Actively participated in the migration of our existing Hospital Information System (HIS).
- Report dashboard management page developed.
- A major accomplishment throughout training was creating the Emergency Doctor's Dashboard as a full stack developer.

## Projects

### ○ Temporal Dynamics of Arid Savannas and Mangroves

under Innovation & Entrepreneurship Development Cell (CSE) as Research assistant

- A project to display variation of different vegetation indices in various vegetation covers.
- Proved MVI and MFI's superiority over NDVI in mangrove vegetation
- Generated Seasonal Trends graph of regions of Botswana and Henry Island using the above indices
- After that with linear regression the seasonal trends of decrease and increase were noted

Tech Stack-[Google Earth Engine, MYD13Q1 Modis dataset, python, matplotlib]

### ○ Utilities Billing System

- Created a system to generate and store electric bill
- Display 3 months record
- New Customer Addition/Deletion
- New Appliance application

Tech Stack-[python, mysql, mysqlconnector, flask, matplotlib]

- [Github link](#)

### ○ Facial Mood Detection

- A deep learning system which learns about the mood of the person from the image of his/her face
- Returns suitable playlist based on the mood via spotify automation

Tech Stack-[python, keras, optimizer, regularizer, convolutional layer, numpy, pandas, pyautogui]

- [Github link](#)

### ○ Emergency Doctor Dashboard

under CK Birla as an intern

- A dashboard with which an user can login and create doctor entry list for ER for each day
- Will be automatically updated at the Display Screen based on system date and time
- Can create entries for new doctors as well as departments with admin access
- Can create new users to access the page (with admin access) to create entries.

Tech Stack-[python, mysql, mysqlconnector, flask, HTML, CSS, Javascript, Jinja2, Selenium]

## Certifications

- Python Basics for Data Science(edX-IBM verified)
- Intro to Machine Learning(Kaggle)
- Python Data Structures(Coursera-University of Michigan)
- Disaster Risk Monitoring Using Satellite Imagery(NVIDIA)
- Data Analytics(IBM)
- Cloud Training(Google)
- "Artificial Intelligence, Internet Of Things, Machine Learning & Data Analytics" - Fundamentals at National University Of Singapore(IEM America, Smart Society)

## Achievements

- NPTEL Discipline Star(01/2023 - 04/2023)
- Grade of 89.5% in Google's Crash course on Python

## Contact

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**Leetcode:**

<https://leetcode.com/u/Arpanleedan/>

**Location:** Kolkata, India

## Education

2021-2025

### Bachelor Of Technology

Institute Of Engineering & Management, Kolkata

9.15

2019-2021

### CBSE Class XII

Delhi Public School, Ruby Park 90.6%

2009-2019

### ICSE Class X

Ram Mohan Mission High School, Kolkata

92.3%

## Skills

Python || Java || MySQL || Data Structures  
|| Machine Learning || Data Analytics ||  
SQL || HTML || CSS || Google Earth Engine  
|| GCP || GitHub || SkLearn || Flask ||  
Numpy || Remote Sensing

## Subjects

Database Management Systems, Artificial Intelligence and Machine Learning, Data Structures and Algorithms, OOPS, Operating Systems

## Interests

- Photography
- Music
- Gaming

## Language

English (Read, Write and Speak)

Bengali(Read, Write and Speak)

Hindi(Read and Speak)

## Coding Challenges

- Open Source Contributor(ACM-IEM : Diversion) 2022
- Codefusion Coding Contest (Resourcio Community) 2023