# Tapan Mahata

Roll No.:234161010
M.Tech - Data Science
B.Tech - Computer Science and Engineering
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## Education

| Degree/Certificate | Institute/Board | CGPA/Percentage | Year |
|---|---|---|---|
| M.Tech | Indian Institute of Technology, Guwahati | 7.81 | 2023-Present |
| B.Tech. | Government College of Engineering and Leather Technology, Kolkata | 8.68 | 2018-2022 |
| Higher Secondary | WBCHSE Board | 87.00% | 2018 |
| Secondary | WBBSE Board | 91.23% | 2016 |

## Projects

- **Effective Drone navigation using deep reinforcement learning** *Sept. 2023 - Nov. 2023*
  *Dr. Arijit Sur/Deep learning project/AI ARCHITECTS* Github
  – Objective: This is a project about deep reinforcement learning autonomous obstacle avoidance algorithm for UAV. The whole project includes obstacle avoidance in static environment and obstacle avoidance in dynamic environment. In the static environment, Multi-Agent Reinforcement Learning and artificial potential field algorithm are combined.In the dynamic environment, the project adopts the combination of disturbed flow field algorithm and single agent reinforcement learning algorithm.
  – Tech Stack: Python,numpy,pytorch,matplotlib,seaborn,matlab,Neural network,Reinforcement learning

- **World population analysis** *Nov. 2023*
  *Dr Neeraj Kumar Sharma | IIT Guwahati | Data Science* Github
  – Objective: Analyze population data sourced from various websites for the world and India, utilizing web scraping techniques. Visualize data trends using matplotlib and seaborn, perform data cleaning with pandas, and use numpy for numerical computations. Implement polynomial regression for predicting and estimating future population trends.
  – Tech Stack: Python, pandas, numpy, matplotlib, seaborn, BeautifulSoup

- **Text similarity calculator** *Dec. 2023*
  *Personal project* Github
  – Objective: Imagine having two pieces of text and wanting to know just how alike they are. This project dives deep into understanding the essence of these texts, capturing their underlying meaning through a lens of 384 dimensions. Using an all-MiniLM-L6-v2 model, it transforms these texts into vectors, essentially turning their core messages into mathematical representations. To determine their similarity, it's like finding common ground by aligning these vectors through a process akin to finding their 'dot product'—a mathematical approach to measure their closeness on a scale from 0 to 1.
  – Tech Stack: Javascript,HTML,CSS , Huggingface js Api

## Technical Skills

–**Programming**: Python, C, C++, Matlab , Javascript
–**Web Devlopment**: HTML, CSS, Javascript , DOM manipulation, React Js , Mysql , PHP
–**Data Science**: Numpy, Matplotlib, Pandas ,Tensorflow, Seaborn, Pytorch

## Key courses taken

–**Mathematics**: Linear Algebra, Basic Calculus, Discrete Maths, Probability and Statistics
–**Data Structure and Algorithm**:
–**Deep Learning**:
–**Machine Learning**:
–**Python**:
–**Image Processing with machine learning**:
–**NLP with LLM**:
–**Database management system**:
–**Fullstack webdevlopment**:

## External Links

Leetcode