TANMAY TOTLA

Roll No.:210103108
B.Tech - Mechanical Engineering
Indian Institute Of Technology, Guwahati

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EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech. Major	Indian Institute of Technology, Guwahati	7.52 (Current)	2021-Present
Senior Secondary	CBSE Board	85.0%	2021
Secondary	CBSE Board	91.6%	2019

PROJECTS

- **MITRA - weed identification and removal robot** *Sep. 2022 - Ongoing*
  4I Labs, IIT Guwahati Github
  - Hardware part: Manufactured a prototype autonomous **weed removal robot** equipped with cameras.
  - **Software part**: Trained a **deep learning YOLOv5** (You Only Look Once) model on an annotated dataset of images containing weed species and plant species to identify weeds in **real-time** by concurrently detecting and classifying several things in an image.
  - **Tech Stack**: Numpy, Pandas, PyTorch

- **House-Price Prediction** *Mar. 2023 - April 2023*
  Self Project Github
  - Visualised housing data using **Matplotlib** and **Seaborn**, providing insightful graphs. Preprocessed the data using **sci-kit learn** library for further analysis.
  - Employed a regression approach using the **decision tree regressor** from sci-kit learn. The model achieved an impressive **accuracy rate of 99 percent**. Exported the model using pickle for seamless deployment and reusability.
  - **Tech Stack**: Numpy, Pandas, Scikit-learn, Matplotlib, Seaborn, OpenCV, Pickle, Json

- **ChitChat - Group Chat Application** *April 2023 - July 2023*
  Self Project Github
  - Designed and developed an Android chat application using **Flutter**. Implemented secure and efficient user authentication and database management through **Google Firestore.**
  - Ensured that only authenticated users can engage in chat interactions within the application.
  - **Tech Stack**: Flutter, Firebase

- **Topify - Website to view your top tracks and artists on Spotify** *June 2023 - July 2023*
  Self Project Website
  - Authentication using Spotify Account with required permissions from the user.
  - Can invite up to 25 Spotify users to use the Development Mode app.
  - **Tech Stack**: HTML, CSS, JavaScript, Node.js

TECHNICAL SKILLS

- **Programming Languages**: Python, C, C++, HTML, CSS, JavaScript
- **Skills**: Data Structures and Algorithms, Flutter, FiresBase, MySQL, Node.js
- **Tools/Frameworks**: Numpy, Pandas, Scikit-learn, Matplotlib, Seaborn, OpenCV, Pickle*, Json*, PyTorch*
- **Web Technologies**: MATLAB, Fusion 360 ** Elementary proficiency*

KEY COURSES TAKEN

- **Mathematics**: Real Analysis, Linear Algebra, Differential Equations, Complex Analysis
- **Computer Science**: Introduction to Computing, Programming with C
- **Machine Learning (Online)**: Supervised and Unsupervised Machine Learning, Advanced Learning Algorithms
- **Mechanical**: Mechanical Workshop-I, II, Fluid, Solids, Thermodynamics.

ACHIEVEMENTS

- **Rank 873 out of 16000+ students**, in Codechef Start98
- **Team ranked 3 amongst India's Best 19 Teams**, in a Power Train Design Challenge by Formula Bharat.
- **AIR 4287**, in JEE Advanced 2021 amongst 1 Million candidates
- **Rank 164 in STSE, 2019**, Rajasthan.
- **Best Student Award 2010**, All India General Knowledge Test, Knowledge Olympiad Society Hyderabad

POSITIONS OF RESPONSIBILITY

- **Marketing, Events and Outreach Head**, Automobile Club (IITG RACING) *Apr. 2023 - Ongoing*
- **Mechanical Head**, Mitra, 4i Labs, IIT Guwahati *Apr. 2023 - Ongoing*
- **Events Executive, Election Commission**, IIT Guwahati *Apr. 2022 - Mar. 2023*
- **Executive**, Maintenance Committee, Brahmaputra Hostel, IIT Guwahati *Apr. 2022 - Mar. 2023*