



# TANMAY TOTLA

Roll No.:210103108

B.Tech - Mechanical Engineering

Indian Institute Of Technology, Guwahati

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Github

## 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.
  - tStacks : 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.
  - Stacks : Numpy, Pandas, Scikit-learn, Matplotlib, Seaborn, OpenCV, Pickle, Json
- **ChitChat** Mar. 2023 - April 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.
  - Stacks : Flutter, Firebase

## TECHNICAL SKILLS

- **Programming Languages:** Python, C, C++, HTML, CSS
- **Skills:** Data Structures and Algorithms, Flutter, Firestore, MySQL
- **Tools/Frameworks:** Numpy, Pandas, Scikit-learn, Matplotlib, Seaborn, OpenCV, Pickle\*, Json\*, PyTorch\*
- **Web Technologies:** MATLAB, Fusion 360
- **Operating Systems:** Windows, MacOS \* 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+**, 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