



Tanmay Hiremath
Electrical Engineering
Indian Institute of Technology Bombay

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UG Second Year
Male
DOB: 14/11/2001

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2021	0.00
Intermediate/+2	HSC	ASV Junior College, Navi Mumbai	2019	84.46
Matriculation	CBSE	J.H. Ambani School, Mumbai	2017	10.00

SCHOLASTIC ACHIEVEMENTS

- Secured **All India Rank 449** in the **JEE Advanced** amongst 0.2 million candidates (2019)
- Achieved **99.9** percentile in the **JEE Main** amongst 1.14 million candidates (2019)
- Awarded **Fellowship** in **KVPY SX** stream, a scholarship program funded by the Department of Science and Technology of the Government of India (2019)
- Awarded Certificate of merit for being in the top **1%** in **NSEC** & qualified for **INChO** (2019)
- Bagged the **1st** prize in **BSE International Finance Olympiad**, a BSE initiative (2017)
- Among the **4** candidates from Maharashtra to be awarded by the Minister of IT in the **Digital Wellness Challenge**, an initiative under the Digital India programme (2016)

PROJECTS

Tinkerers' Laboratory Website

(Apr '20-Jul '20)

Seasons of Code | Web and Coding Club, IIT Bombay

- Built an **E-Inventory management** system for **2500+** users to issue inventory items and view their status of availability, using **Angular** for frontend and **Django** for backend
- Created an **Application Programming Interface(API)** using Angular's HTTP Client and **Django REST framework** for easy communication between frontend and backend
- Constructed a **relational SQLite database** using **Django framework** to store the details of items in the laboratory such as category, current holder's details, timestamp of issue
- Included an **admin panel** to manage inventory items and sent alerts by email to the admins
- Incorporated IITB's **Single Sign On** authentication implemented using **OAuth 2.0**

Smart Traffic Management System

(Apr '20-Jun '20)

Institute Technical Summer Project | Institute Technical Council, IIT Bombay

- Built a Traffic Management System which allocates time to each lane depending on the type and number of vehicles in each lane which were identified using Image Processing
- Developed a **Virtual Interface** in Django framework which booted the program, input the images to it, and then exhibited the current status of each traffic signal on the **web-app**

Introduction to Electrical Engineering Practice

(Aug '19-Oct '19)

Course Project | Guide: Prof. Joseph John

- Built a **5V regulated supply** using IC 7805, Zener regulator & step down transformer
- Designed a 7-segment display using **flip-flops** and a **power inverter** circuit using LM555
- Measured **rpm** of a motor, mimicked the heart-beat using LED, sensed temperature using LM35, transmitted and received an image using **Arduino** and reconstructed it in **Python**
- Modulated a waveform using MC1496 and filtered a waveform received using **RTL-SDR**
- Designed and tested an automatic lighting arrangement using a **solar panel** characterized for different daylight intensity levels using **LDR**, **LM 324**, and a miniature 5-Volts relay
- Simulated and tested a **linear feedback system** using Proportional Integral Derivative (PID) algorithms in **Simulink**, designed for controlling the azimuthal angle of a antenna

Real-time Chat Application

(Jul '20)

Self Project

- Developed a chat application with frontend in **Ionic Angular** and backend in **ExpressJS**
- Incorporated a feature to create and join private rooms using Web Sockets in **SocketIO**
- Deployed the Android installable app as apk with the backend hosted on **Heroku**

UMIC Website

(Jul '20-Aug '20)

Unmesh Mashruwala Innovation Cell, IIT Bombay

- Created a **responsive** website to showcase the technical team's work in a concise manner
- Incorporated Javascript elements, CSS animations to give an aesthetic look to the website
- Built a database in **Django framework** for updating dynamic content on the website

Bluetooth Controlled Bot

(Aug '19)

XLR8 | Electronics and Robotics Club, IIT Bombay

- Engineered a bluetooth-controlled four-wheeled bot with an integrated **on-board power supply** and PCB, capable of maneuvering through various obstacles present on the track
- Used **ATTiny2313** microcontroller for functioning, **L293D** motor driver to control the motors and, **HC-05** bluetooth module for wireless communication

POSITIONS OF RESPONSIBILITY

Institute Sports Convener | Institute Sports Council

(Jun '20-Present)

Among the 2 selected out of 30+ applicants to represent the interests of **10,000+** students

- Responsible for maintaining and developing the **PHP** based official website of IITB Sports
- Currently developing the first-ever IIT Bombay Sports App which is a **Progressive Web App**, an installable, cross-platform, responsive web app using **MEAN stack** development
- Using **Angular** as frontend and **NodeJS** for backend in the app, with features such as Live Score of General Championship, Court Booking, automatic E-Certificate Generator, etc.
- Building an **admin panel** with three levels of access to provide a **user-friendly** interface to the authorized members of the council for managing and updating the content of the app

TECHNICAL SKILLS

Languages	C++, Python, Julia, Bash
Softwares	GNURadio, Adobe XD, AutoCAD, SolidWorks, Git, L ^A T _E X, MATLAB
Web Development	JavaScript, jQuery, Angular, Ionic, PHP, Django, Node.js, Socket.IO
Python Libraries	Pandas, Scikit-learn, Matplotlib, Numpy

KEY COURSES

Electrical Engineering	Introduction to Electrical Engineering Practice, Power Engineering-I, Analog Circuits*, Probability and Random Processes*, Digital Systems*, Signal Processing-1*
Mathematics and Computer Science	Calculus, Linear Algebra, Differential Equations-II*, Complex Analysis*, Computer Programming and Utilization

*To be completed by December, 2020

EXTRACURRICULAR ACTIVITIES

- Department of Sustainable Social Development, **National Social Service** (2020)
 - Made educational **YouTube videos** on topics related to sustainable social development for middle school students as part of the Tarang subdivision
 - Awarded with a **special mention** for 80 hours of **exemplary** volunteering work
- Completed a certified course for **Data Analytics** conducted by UGAC successfully (2020)
- Successfully conducted 2 major strategy games, which tested entrepreneurial skills, managing **300+** participants as part of E-Summit 2020 conducted by E-Cell, IITB (2020)
- Successfully finished the **12km** long **Cyclothon** organized by Techfest, IIT Bombay (2020)
- Negotiated with educational institutes around Mumbai & publicised **Techfest, IIT Bombay**, bringing in a total footfall of **175K+** (2019)