Anubhav Bhatla | **200070008**
Electrical Engineering | **B.Tech.**
Indian Institute of Technology Bombay | **Gender: Male**
DOB: 11/9/2001

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2024	

Pursuing a **Minor Degree** in **Artificial Intelligence & Data Science**, IIT Bombay

Scholastic Achievements

- Secured **All India Rank 266** in *JEE Advanced, 2020* among 1.6 lakh candidates *(2020)*
- Acquired an **All India Rank 490** in *JEE Mains, 2020* among 11 lakh candidates *(2020)*
- Awarded the *Kishore Vaigyanik Protsahan Yojana (KVPY)* fellowship with **All India Rank 337** *(2018)*

Key Projects

General Purpose GPUs | *Research Project* *(Ongoing)*
Guide: Prof. Virendra Singh

- Reviewing literature about analyzing and leveraging **decoupled L2 cache** and implementing it on **GPGPU-Sim**
- Studied and reviewed the **SIMT Core**, **Memory systems** and the programming model related to GPU architecture
- Simulated various tests and operations on GPGPU-Sim and analyzed the **benchmark outputs** received

IITB RISC-22 | *Course Project* *(Spring '21)*
Guide: Prof. Virendra Singh

- Led a **Team of 4** to design & implement the **16-bit** IITB RISC-22 Microprocessor, capable of running a total of **17** instructions using both **6-stage Pipelining** & **Multicycle** implementations
- Designed and implemented key components such as the Datapath, Controller block and Memory system in **VHDL**
- One of the few teams to optimize the pipelined architecture using Hazard detection, Forwarding & Branch prediction
- Performed successful software testing for all 17 instructions using **Quartus RTL** Simulations & respective Tracefiles

Digital Circuits Lab | *Course Project* *(Autumn '21)*
Guide: Prof. Maryam Shojaei Baghini

- Learnt the working of **Finite-State Machines** and the methodology for implementing them using D-FlipFlops
- Implemented a **4-bit Sequence Generator** with D-FlipFlops using Sequential & Behavioral modelling in **VHDL**
- Performed software testing using **Quartus** Simulations & hardware testing using **Scanchain** on **Krypton** board

Microprocessors Lab | *Course Project* *(Spring '21)*
Guide: Prof. Saravanan Vijayakumaran

- Designed and tested C code for implementation of an **ATM** capable of dispensing 500 & 100 denomination notes
- Integrated a **password security** feature allowing multiple users to safely access their respective accounts
- Used a **USB-UART** module to couple keyboard with the **PT-51** controller through laptop for movement inputs

Automatic Door Lock | *Club Project* *(Autumn '21)*
Tinkerers' Laboratory, IIT Bombay

- Worked on an automatic locking mechanism made using an **ESP32** Microcontroller connected to a **Servo Motor**
- Used **TinkerCAD** software to simulate the circuit components for ensuring efficient implementation of my design
- Incorporated Internet of Things **(IoT)** functionality using the **Blynk** app to allow for easy control from a smartphone

Technical Skills

Languages	C, C++, Python, MATLAB, VHDL, 8051, 8086 Assembly
Software	ArduinoIDE, AutoCAD, SolidWorks, Quartus, Adobe Photoshop, Blender
Tools	Git, LaTeX, GPGPU-Sim, NGSpice, Keil μVision, Simulink
Development	HTML, CSS, JavaScript, React, MongoDB, Bootstrap, SQL
Python Libraries	Pandas, NumPy, Scikit Learn, TensorFlow, Keras, PyTorch

Extracurricular Activities

- Designed & assembled an RC plane to participate in the RC Plane Competition by Aeromodelling Club, IITB *('21)*
- Awarded a **Special Mention** out of a total of **82** students in the LaTeX bootcamp conducted by UGAC, IITB *('21)*
- Completed a year long **NCC** programme at IIT Bombay *('21)*