Anoushka Dey
Electrical Engineering
Indian Institute of Technology Bombay
Specialization: Microelectronics and VLSI

210010010
Dual Degree (B.Tech. + M.Tech.)
Gender: Female
DOB: 24/03/2003

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2026	

Pursuing a **Minor** degree in **Computer Science and Engineering**

SCHOLASTIC ACHIEVEMENTS

- Awarded a **Change of Branch** to the Electrical Engineering Dual Degree Programme out of **1000+** students (2022)
- Secured **99.6** percentile in **JEE Main** and was within the **top 0.02** percentile in **JEE Advanced** (2021)
- Secured **All India Rank 466** (**SA stream**) in the **KVPY** examination conducted by **IISc Bangalore** (2020)

RESEARCH INTERNSHIP

3D Mapping for Quadruped Robot Motion Control in Simulation *(May '23-Jul '23)*
TU Munich | Guide: Hongpeng Cao, Daniele Bernardini and Prof. Marco Caccamo

- Set up a **locomotion scenario** for a quadruped robot in **PyBullet** and implemented a **perception pipeline** to get **RGB-D frames** for **3D environment understanding**
- Generated **3D point clouds** using **Open3D** and used the **Iterative Closest Point (ICP) algorithm** for the **point cloud registration procedure** and **3D environment reconstruction**

KEY PROJECTS UNDERTAKEN

CPU Design and Implementation | *Course Project | Prof. Virendra Singh* *(Nov '22-May '23)*

- Designed an **8 register, 16-bit computer system** using a **6 stage pipeline architecture with 5 pipeline registers** and implemented **data forwarding, stalling** and completed the **hardware implementation**

Keyboard and SPI Implementation | *Microprocessors Lab | Prof. Saravanan Vijayakumaran* *(Jan '23-Apr '23)*

- Implemented a keyboard using the **PT-51 microcontroller** using **embedded C** code written on **Keil μVision5**, used **ATMEL FLIP** to configure the microcontroller and implemented an **SPI interface using USB-UART**

Sequence Generator Modelling | *Digital Circuits Lab | Guide: Prof. Maryam Shojaei Baghini* *(Jul '22-Oct '22)*

- Used **VHDL** on **Quartus Prime** to encode the designs and perform **RTL simulation** on **ModelSim Altera** and the **UrJTAG** terminal to perform scanchain on the **Xenon-10 Board**

Sudoku Solver | *Winter in Data Science | Analytics Club, IIT Bombay* *(Dec '22-Jan '23)*

- Used **OpenCV** for puzzle detection and implemented a **digit detection system using Tensorflow and MNIST**

Stock Market Prediction using the ARIMA Model | *Web and Coding Club, IIT Bombay* *(Apr '22-Jul '22)*

- Used the **ARIMA Model** for the stock market prediction of two stocks and performed **exploratory data analysis on stocks** using the **API yfinance** during the learning stages of the project

POSITIONS OF RESPONSIBILITY

Undergraduate Teaching Assistant | *Department of Computer Science and Engineering* *(Mar '23-Jun '23)*

- Worked as a TA for **40+ UG first year students** for the course **CS101 - Computer Programming and Utilization** under **Prof. Mythili Vutukuru**

Head Girl of Hiranandani Foundation School, Thane *(Jan '18-Jan '19)*

- Selected by a distinguished panel of senior teachers and the school principal to **lead the Student Council Body** for the academic year 2018-2019 **based on academic merit and extracurricular achievements**

TECHNICAL SKILLS

Software	LaTeX, SolidWorks, ANSYS Spaceclaim, Quartus Prime, Keil μVision5, ATMEL FLIP, Realterm, Ngspice, Gazebo Ignition, Git
Programming	C++, Python, Java
Embedded	VHDL, Embedded C, 8051 Assembly
Operating Systems	Linux, Windows
Libraries	NumPy, Matplotlib, SciPy, Pandas, Seaborn, Tensorflow, OpenCV, PyBullet, Open3D

EXTRACURRICULAR ACTIVITIES

- Worked on the **design and implementation** of the **Recovery Subsystem** of the **IIT Bombay Rocket Team**
- Completed a year long programme in **Chess** under the **National Sports Organization, IIT Bombay**