



**Vidit Khazanchi**  
**Metallurgical Engineering and Materials Science**  
**Indian Institute of Technology Bombay**

**210110119**  
**B.Tech.**  
**Gender: Male**  
**DOB: 08/12/2003**

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2025	
Intermediate	ISC	Don Bosco Park Circus	2021	93.00%
Matriculation	ICSE	Don Bosco Park Circus	2019	97.00%

Pursuing a **Minor Degree** offered by the Department of **Computer Science and Engineering** at **IIT Bombay**

## SCHOLASTIC ACHIEVEMENTS

- Ranked **15th** in the Department of Metallurgical Engineering in a batch of **140+ students** (Present)
- Achieved **AA** grade in Computer Programming, Computation Lab courses at IIT Bombay ('22)
- Achieved **98.78 percentile** in Joint Entrance Examination Advanced out of **2,50,000+** candidates ('21)
- Achieved **99.52 percentile** in Joint Entrance Examination Mains amongst **1.1 million+** candidates ('21)
- Ranked **169** in West Bengal Joint Entrance Examination out of **92000+** candidates ('21)

## PROFESSIONAL EXPERIENCE

**Student Trainee** | *AIShield, Bosch Global Software Technologies, Bangalore, India* (May '23 - Jul '23)

- Thoroughly studied existing **Evasion Attacks on Tabular Data** using **ML Models**, gaining insights for research
- Devised a **novel evasion technique** for tabular data, surpassing current methods and achieving superior scores
- Submitted a **patent application** at **Bosch**, showcasing the innovation and uniqueness of the developed evasion technique
- Actively crafting a **research paper** on the same technique, showcasing **expertise in the field of AI Security**

**Security Issues in Large Language Models (LLMs) and their Impact** (Feb '23 - Present)

Guide: **Dr. Qiongkai Xu** | *University of Melbourne* | *Research Internship*

- Began research by studying security issues in LLMs through **existing papers** to understand the field's **current state**
- Engaged in collaboration with a **research partner** to explore **security aspects of LLMs**, conducting experiments jointly
- Working on a **research paper** on **third-party attacks** to advance the field and contribute to academic discourse

**Machine Learning Developer** | *senzcraft, Kolkata, India* (Dec '22 - Mar '23)

- Implemented **Human in the Loop (HITL)** methodology on all existing products, resulting in **enhanced results**
- Conducted study of open-source HITL tools and selected **Label Studio** as the optimal solution for the company's needs
- Recognized for performance and awarded a **Letter of Recommendation (LoR)** for showcasing exceptional technical skills

## KEY PROJECTS

**ResoBin** | *DevCom, IIT Bombay* (Sept '22 - Present)

- Managing a one-stop online platform for reviews and resources on **3000+** courses catering to **10,000+** students
- Collaborated with **Student Support Services** to successfully launch the crucial **Course Information** booklet on ResoBin
- Enhanced ResoBin with new features, boosting **user traction, engagement, and satisfaction** within the **student community**

**Mess Digitalization** | *DevCom, IIT Bombay* (May'22-Aug'22)

- Worked on a portal to **digitalize** the process of mess management in hostels serving over **10,000** people regularly
- Developed **REST API Endpoints** to simplify the previously tedious procedure of **adding/removing rebates**
- Worked with **Flask** and **MongoDB** as database to store mess records replacing the existing paper-based system

**Socket Programming** | *Course Project, CS224: Computer Networks* (Nov '22)

Guide: **Prof. Vinay J. Ribeiro** | *Department of Computer Science and Engineering, IIT Bombay*

- Worked in a **team of 2** to develop a **chat application** using socket programming in the **C programming language**
- Designed two-way communication with socket programming and **Stop-and-Wait ARQ** for accurate data transfer
- Implemented managed timeouts for **efficient packet retransmission**, ensuring a robust communication system
- Gained **practical experience** in socket programming and network communication through **real-world simulations**

## DevCom Website | *DevCom, IIT Bombay*

(Jun'23 - Present)

- Pioneered the development of the Community website, driving **increased outreach** and **impact for the organization**
- Managed a **2-person** team to build the website from scratch, ensuring efficient collaboration and a seamless development process.
- Leveraged **React** for development and **Figma** for designing, resulting in a **user-friendly** and a **visually appealing website**

## 1-D Transient Conduction | *Course Project, MM204: Transport Phenomena*

(Apr '23)

Guide: **Prof. Deepoo Kumar** | *Department of Metallurgical Engineering & Materials Science, IIT Bombay*

- Applied **finite element method** using **Python** to determine the fuel element temperature distribution across a plane wall
- Plotted and analyzed the graph of the temperature change with respect to time using libraries like **Numpy** and **Matplotlib**
- Gained **practical experience** in understanding boundary conditions and assumptions through **real-world simulations**

## Neural Machine Translator | *Self Project*

(Jun'22-Jul'22)

- Created an **NMT** after **preprocessing** large amounts of complex data to translate sentences from **English to French**
- Solved the problem using 3 models - **Simple RNN**, **Bidirectional RNN** and finally the **Encoder Decoder Model**
- Using the **Encoder Decoder Model**, attained a final accuracy of **97.83%** and a validation accuracy of **97.72%**

## Finger Counting System | *Self Project*

(May'22-May'22)

- Utilized **MediaPipe** and **OpenCV** to accurately determine the number of fingers using each finger's index points
- Developed a **Hand Tracking Module** that proficiently recognizes the number of fingers leveraging the concept of **OOPs**

## Credit Card Fraud Detection | *Self Project*

(May'22 - Jun'22)

- Conducted in-depth exploratory data analysis (**EDA**) on a credit card fraud detection dataset consisting of **31 parameters**
- Applied Machine Learning Algorithms, such as **KNNs** and **Decision Trees** on the dataset to obtain a best **accuracy** of **99.96%**
- Addressed the **class imbalance** problem in the dataset by applying the **SMOTE Technique** to generate artificial data

## TECHNICAL SKILLS

### Programming Languages

C++, Python, Git, L<sup>A</sup>T<sub>E</sub>X, Javascript, HTML, CSS

### Development

ReactJS, Django, Flask, MySQL, MongoDB, Redis, Selenium

### AI & Machine Learning

TensorFlow, PyTorch, OpenCV, Scikit-Learn, NumPy, Pandas, Matplotlib, Seaborn

## COURSES UNDERTAKEN

- **Computer Science** : Computer Programming and Utilization, Computer Networks, Data Analysis and Interpretation, Data Structures and Algorithms, Computation Lab
- **Mathematics** : Calculus I, Calculus II, Linear Algebra, Ordinary Differential Equations, Introduction to Numerical Analysis
- **MOOCs** : Neural Networks and Deep Learning, Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization, Structuring Machine Learning Projects, Convolutional Neural Networks, Sequence Models (part of **Deep Learning Specialization** by **DeepLearning.AI** and **Andrew NG**)
- **Miscellaneous** : Quantum Physics and Application, Basics of Electricity Magnetism, Economics, Introduction to Electrical and Electronics Circuits, Electrical/Electronics Lab, Physical Chemistry, Inorganic & Organic Chemistry

## POSITIONS OF RESPONSIBILITY

### Project Lead | *DevCom, IIT Bombay*

(March '23 - Present)

- Leading a team of **20+ developers**, entrusted with the responsibility of maintaining crucial digital infrastructure for the institute.
- Mentored and guided developers in writing **production-quality, maintainable code** and **seamless deployments**.
- Significantly contributed to the continuous improvement of **ResoBin**, a vital **academic platform** for all students at IIT Bombay

### Mentor | *Seasons of Code, Web and Coding Club, IIT Bombay*

(May '23 - Present)

- Assisting a total of **12 students** across various years to complete a Project on **Enhancing Images through GANs**
- Organized and Delivered **Weekly Resources** ranging from **Deep Learning tutorials** to the theory behind GANs
- Conducted **regular meets** to address queries, checking mentees' progress and debugging programming errors

## EXTRACURRICULARS

- Participated in **Hacktoberfest'22**, making contributions through **4 pull requests** to diverse open-source projects on GitHub ('22)
- Qualified for **Optiver's** Quantitative Trading Winter School organized by, **IIT Delhi**, standing out among **15K+** candidates ('22)
- **Ranked 22nd** in CodeWars Competition, competing among **70+ teams**, organized by Web and Coding Club, IIT Bombay ('22)
- Actively participated and gained valuable knowledge of **micro-electronics** in the **XLR-8 competition** ('22)
- Successfully completed a comprehensive year-long training in **Chess** through the **National Sports Organization** ('21-'22)
- Adventurously trekked **Kalsubai**, the highest peak of Maharashtra with an elevation of **5400 feet**, fostering determination ('22)