Reeyansh Shah | **22B0412**
Electrical Engineering | **Dual Degree (B.Tech. + M.Tech.)**
Indian Institute of Technology Bombay | **Gender: Male**
Specialization: Microelectronics and VLSI | **DOB: 31/05/2004**

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2027	9.11
Intermediate	CBSE	Poddar Brio International School	2022	94.80%
Matriculation	ICSE	P.G Garodia (ICSE)	2020	97.80%

Pursuing a Minor degree in **Artificial Intelligence and Data Science**, CMInDS, IIT Bombay

SCHOLASTIC ACHIEVEMENTS

- Department **Rank 9/98** students in the **Electrical Engineering** Dual Degree program on basis of CPI. *[2023]*
- Secured a **Change of Branch** awarded to the top **9**% out of 1400**+** students owing to academic acumen. *[2023]*
- Awarded an **AP** (Advanced Performer) grade (**top 1%**) in **two** courses for exceptional performance. *[2022]*
- Awarded top **AA** (10) grade for exemplary performance in **10 of 17** courses in first year at IIT Bombay. *[2022]*
- Ranked in top **1.2** percentile out of **0.16 million+** applicants in **JEE Advance Examination** across India. *[2022]*
- Attained **99.74** percentile out of **1 million+** candidates in the nationwide **JEE Mains** Entrance Exam. *[2022]*
- Recipient of the prestigious **KVPY fellowship** awarded to **top 1%** candidates by **Government of India**. *[2022]*
- Achieved a rank in the **top 1%** of candidates who appeared for **NSEJS** conducted by **IAPT** with HBCSE. *[2018]*
- Secured **National Rank 2**, **International Rank 36** and a gold medal in **Singapore & Asian Science Maths Olympiad** (SASMO) conducted by the Singapore International Math Contest Center (SIMCC). *[2017]*

INTERNSHIP EXPERIENCE

Data Analyst | *NoQs Digital Pvt Ltd* *[Dec '23 - Present]*

Received a letter of recommendation and Best Team Player Award for exceptional contributions

- Designed User Interface Dashboards, applying expertise in **Google Sheets**, **PowerBI**, and data visualization.
- Prepared **management reports**, highlighting trends, patterns through **presentations** by relevant data analysis.
- Developed **dynamic dashboards**, integrating employee and attendance **case studies** for data-driven analytics.

KEY PROJECTS

16 bit ALU Computer System | *Course project* *[Oct '23 - Nov '23]*

Guide: Prof. Virendra Singh, Department of Electrical Engineering, Indian Institute of Technology Bombay

- Developed combinational logic to understand and execute **6 distinct instructions** of assembly language.
- Engineered **8-register**, **16-bit system**, optimizing predicated execution, and streamlining **load-store efficiency**.
- Developed VHDL code for the controller-FSM, integrated **datapath**, and executed concise **test bench simulations**.

FPGA based SHA-256 for Digital Signature Generation | *Self project* *[Oct '23 - Nov '23]*

- Developed combinational logic to understand and execute **6 distinct instructions** of assembly language.
- Engineered **8-register**, **16-bit system**, optimizing predicated execution, and streamlining **load-store efficiency**.
- Developed VHDL code for the controller-FSM, integrated **datapath**, and executed concise **test bench simulations**.

Object Detection using Residual Networks | *Winter in Data Science* | *Analystics Club* *[Dec '23 - Present]*

- Implemented **ResNet** with advanced **supervised ML** techniques, optimized **CNN** layers for precision.
- Conducting rigorous testing on **CIFAR-10 dataset**, refining and evaluating object detection algorithms.

Mobile Application and websites for IIT Bombay Hospital | *Course project* *[Aug '23 - Nov '23]*

Guide: Prof. Sandip Mondal, Department of Electrical Engineering, Indian Institute of Technology Bombay

- Developed a **mobile application** using **flutterflow** to digitalize patient records allowing health management.
- Innovated an **absence notification process** by engineering app for users to email instructors reasons for absence.
- Optimized **accessibility**, integrating app to include pharmacy allowing students to conveniently collect medicine.
- Implemented **automatic bookings** for doctor appointments and streamlined **lab test scheduling** for efficiency.

Route Tracing Payload Dispatch vehicle | *Course project* *[Nov '22 - Feb '23]*

Guide: Prof. Dinesh Sharma, Department of Electrical Engineering, Indian Institute of Technology Bombay

- Designed an **Arduino** line-following-bot with advance drop-off ability for precise **navigation** and cargo deployment.
- Optimized design to achieve a **30% weight reduction** while enhancing load-bearing to **0.3 kg payload** capacity.
- Strategically curated components, achieving a **20%** cost reduction while establishing design repeatability framework.
- Leveraged **Fusion 360** for intricate 3D modeling and **LaserCAD** for precise laser cutting,optimizing the design.

Solar Lantern Project | *Self project* *[2022]*

- Designed a prism-shaped box to **strategically place** Solar Panels for versatile light absorption in many orientations.
- Analysed **technical viability** by calculating LED power consumption and estimated battery life of **28.57 hours**.
- Conducted cost analysis comparing lanterns to incandescent lamps, revealing a **payback period** of **6500+** hours.

POSITION OF RESPONSIBILITY

Institute Academic Coordinator | EnPoWER, Undergraduate Academic Council *[May'23 - Present]*
*Among top 4 selected to promote research and address academic queries of **5000+** students*

- Launched **ResCon**, a UG research conference, witnessing over **100** submissions & sponsorship of **INR 0.5 Million**
- Ideated and executed flagship event **Enthuse** for **1400+** freshman students to foster research interest among them.
- Spearheaded the **Summer Undergraduate Research Program** by engaging **200+** passionate **student researchers**, coordinating **80+ diverse projects** by collaborating with **48+ professors** across **20+ departments**.
- **Conceptualized** and promoted **Curious Community Groups** to foster research discussions amongst students.
- **Co-authored** the 2nd edition of **Core Intern Booklet**, a collection of **80+ research internship** and **university research opportunities** across the globe reaching around **2000+** students guiding them make an informed choice.
- Facilitated a **session** for **1400+** sophomores, providing guidance on essentials and intricacies of an effective **resume**.
- Designed **Novice's guide**, an extensive manual with comprehensive steps & resources to pursue a research project.
- Hosted **Sophomore 101** sessions to mentor **1400+** second-year students about the various **learning and research opportunities** which are offered in their departments with the possible modes of taking up research projects.

TECHNICAL SKILLS

Programming Languages : C, C++, Python,VHDL, Arduino IDE Javascript,Latex
Tools and Software : Quartus, NGspice, Solidworks, MATLAB, Fusion 360, Git, AutoCad, Eagle, Canva

KEY COURSES

Data Science	Introduction to Machine Learning*, Programming for Data Science
Electrical Engineering	Microprocessors*, Control Systems*, Electronic Devices and Circuits*, Design Thinking*, Analog Circuits, Digital Systems, Signal Processing, Probability and Random Processes, Power Engineering
Mathematics	Ordinary and Partial Differential Equation, Linear Algebra, Vector Calculus
Miscellaneous	Quantum Physics, Classical Physics, Physical Chemistry, Organic and Inorganic Chemistry, Entrepreneurship, Sociology, Makerspace, Biology

**to be completed by April 2023*

EXTRACURRICULARS

Academic	• Won a **Gold Medal** internationally in **Spell Bee** conducted by SpellBeeInternational. • Awarded with **Certificate of Merit** in the first level of **Homi Bhabha** Exam by MSTA. • Conferred with a **Distinction Certificate** in the **Australian National Chemistry Quiz**. • Secured **3rd** rank in **Mathematrix** 2019 conducted by RN Podar College of Commerce. • Won the **Interschool KenKen** Competition among **300+** students from across Mumbai. • Received the **Ryan Prince Award** for outstanding performance by Ryan International.
Technical	• Engineered an autonomous bot to navigate and detect obstacles using **LegoMindstorms** at the **Senior Robotics Workshop** conducted by Nehru Science Centre, Mumbai. • Gained insights in **Data Science and AI in Sports** workshop conducted by Aahvan. • Successfully completed Learnerspace course in **Finance** and **Data Structures** and Algorithms
Sports	• Completed more then **80+ hours** of intensive training in **Yoga** under **NSO**, IIT Bombay. • Secured a rank in **top 20** in **Indian School Scrabble Championship** in Mumbai Division.
Social	• Participated in **Hamper Distribution** to **Cancer patients** at Sion Hospital by SCF. • Participated in School Food Fest (**SUPW**), helping to raise money for an old age home.
Miscellaneous	• Invited to attend the Renzulli Creativity Programme, **University of Connecticut**, USA • Cleared three levels of **Akhil Bhartiya Gandharva Mahavidyalaya** in **Keyboard**. • Successfully graduated by completing **Abacus** and Mental Arithmetic Course by **UCMAS**.