



Sanjay Khatri
Electrical Engineering
Indian Institute of Technology Bombay
Specialization: Communication & Signal Processing

160020043
UG Second Year
Male
DOB: 01/02/1998

| Examination | University | Institute | Year | CPI / % |
|-----------------|------------|-----------------------------|------|---------|
| Graduation | IIT Bombay | IIT Bombay | 2018 | 9.23 |
| Intermediate/+2 | CBSE | Cambridge Court High School | 2016 | 89.20 |
| Matriculation | CBSE | Cambridge Court High School | 2014 | 10.00 |

SCHOLASTIC ACHIEVEMENTS

- Pursuing a Minor degree in **Computer Science & Engineering** (*Present*)
- Awarded a **Branch Change to Electrical Engineering (Department Rank 8 in DD)** (*2017*)
- Secured All India Rank **823** in **JEE advanced** (2 lakh+ Aspirants) (*2016*)
- Achieved a **Percentile 99.73** in **JEE Mains** (11 lakh+ Aspirants) (*2016*)
- Recipient of **KVPY fellowship** with **All India Rank 341** out of 0.1 million candidates (*2014*)
- Qualified **NTSE** with a **Rank 205** and awarded a scholarship by Government of India (*2012*)
- Among **Top 1%** at National level in **NSEP** (Physics Olympiad) and selected for **INPhO** (*2015*)
- Among **Top 1%** at State level in **NSEA** (Astronomy Olympiad) and selected for **INAO** (*2015*)
- Bagged **International Ranks** among top hundred 5 times in **IMO** & 3 times in **NSO** (*2012-16*)

PROJECTS UNDERTAKEN

Junior Design Engineer — IIT Bombay Racing (*Aug '17 - Nov '17*)

- Selected among the **8 Elec JDEs** in the **IITB Racing** team out of 250+ applicants
- Completed the summer induction Program of IIT Bombay Racing to analyze various electrical and mechanical aspects that govern the working and design of the car

XBee based two-way point to point communication system (*Sept '17 - Nov '17*)

- Modified the existing one way XBee Communication in the car to a **two-way** communication
- Fortified various aspects of Mbed & XBee to create a superior communication system

Heart Rate Monitor — Course Project (*Nov '17*)

Guide: Prof. Siddharth Tallur | Department of Electrical Eng., IIT Bombay

- Designed a heart rate monitor using Integrated Circuits, IR Diode and photo-diode which sensed the blood flow through our finger and displayed the heart on an oscilloscope

New Hostel 7 Website based on AngularJS (*Aug '17 - Present*)

Web Development

- Developing hostel website with aim of digitizing and easing various daily requirements of inmates
- Enhanced the front-end of the website using **AngularJS**, a JavaScript-based open-source framework
- Reinforced the backend of the Hostel 7 website by including **Portals** for Library, Mess & Parcels

Walking Gears — Solid Works (*Sept '16 - Nov '16*)

Guide: Prof K.P. Karunakaran | Department of Mechanical Eng., IIT Bombay Course Project

- Designed a geared mechanism which moves a frame Structure, generally used in toys
- Assembled various parts and added **Mechanical Constraints** to make a working model

XLR8 Bot — Bluetooth Controlled Electric Car (*Jul '16-Aug '16*)

Electronics and Robotics Club | IIT Bombay

- Designed a Bluetooth controlled Racing Bot by analyzing the working of RF Circuit
- Studied the various electrical and mechanical aspects of the bot leading to stable motion and gained insights into the usage of Bluetooth module and various Steering mechanisms

POSITIONS OF RESPONSIBILITY

Web & Comp Secretary

(Aug '17 - Present)

Hostel 7, IIT Bombay

- Constructed and revamped the **Hostel 7 Website** linking all the portals for a better experience
- Building an app with live hostel updates, hostel events calendar and live mess menu
- Digitizing the hostel by introducing innovative technological replacements to conventional methods

Teaching Assistant — Basics of Electricity & Magnetism

(Jan '18 - Present)

- Appointed as a Institute Teaching Assistant out of **73 applicants** for the course based on **communication skills** and **academic prowess** in the subject
- Guiding a batch of 50+ Students and helping them build problem solving skills

Teaching Assistant — Bio-sciences and Bio-Engineering

(Aug '17 - Nov'17)

- **1** of **10** students selected to tutor a batch of **50** students for the introductory course in Biology
- Evaluated students' performance regularly collaborated with instructor for teaching tactics

Coordinator, Competitions & LYP — Mood Indigo, IIT Bombay (Apr '17 - Dec '17)

- Conceptualized and organized 7 Multicity Competitions pan India thus increasing outreach
- Invited celebrities for 'Face of Genre', a celebrity endorsement scheme for 9 genres
- Revamped the governing rules and regulations of 50+ competitions in various cultural genres

TECHNICAL SKILLS

- **Programming Languages:** C++, Python, HTML, CSS, JavaScript
- **Operating Systems:** Windows, Ubuntu
- **Software Packages:** SolidWorks, AutoCAD, \LaTeX
- **Electronic Devices:** Arduino, XBee, Mbed

KEY COURSES UNDERTAKEN

- **Electrical:** Electronic Devices & Circuits, Introduction to Electrical Systems, Network Theory, Signals & Systems*, Digital Systems*, Analog Systems*, Electrical machines & Power Electronics*
- **Mathematics and Statistics:** Calculus, Linear Algebra, Differential Equations 1 & 2, Complex Analysis, Data Interpretation & Analysis
- **Other Courses:** Quantum Physics & Applications, Physical Chemistry, Economics, Computer Programming & Utilization, Biology, Basis of Electricity & Magnetism, Cognitive Human Processes*

(* to be completed by May '18)

EXTRA-CURRICULAR ACTIVITIES

Cultural & Sports Activities

- Presented the play **Sonu ka Gold Medal** for Freshman to introduce **Dramatics Club** of IITB
- Successfully completed an year long **NSO** program of **Kho-Kho IIT Bombay**
- Played as a chaser for Hostel 7 in **Kho-Kho** Inter-hostel **General Championship**

Miscellaneous

- Volunteered in the social initiative **CURED**, a national campaign on diabetes which attempted to make a **Guinness world record** for blood sugar check-ups with 200+ diabetes camps
- Jaipur **City Winner** in Derek's Faster Smarter Better Challenge 2013 organized by Vodafone
- Felicitated with **Student of the Year 2015-16** in Cambridge Court High School, Jaipur
- Completed a project on **Mobile Phone Radiation and Health** to represent Cambridge Court High School in Regional CBSE Science Exhibition
- Active delegate in debates and **Dynamic Speaker** at many public Speaking events in school