Sahil Adane | **160260006**
Engineering Physics | **UG Second Year**
Indian Institute of Technology Bombay | **Male**
DOB: 16-01-1999

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2018	9.03
Intermediate/+2	Maharashtra State Board of Secondary & Higher Secondary Education	Pace Junior Science College, Andheri	2016	90.62
Matriculation	Maharashtra State Board of Secondary & Higher Secondary Education	Swami Vivekanand International School, Gorai	2014	96.00

ACADEMIC CREDENTIALS AND ACHIEVEMENTS

- Pursuing an **Honors in Physics** and a **Minor in Mathematics**
- Secured an **All India Rank of 755** out of **13 lakh** candidates in Joint Entrance Examination Advanced
- Awarded **National Talent Search Examination** (NTSE) Scholarship by the NCERT, given to around **1000** students in the country out of **500,000** appearing students

PROJECTS

- **Self Balancing Cycle- Institute Technical Summer Project**
  (Electronics and Robotics Club, IIT Bombay : Summer 2017)
  - **Objective :** To build a **mechanism** to **balance** a **riderless bicycle** in a **stationary position**
  - Researched **extensively** about the **stability** of a **moving bicycle** to fully understand the problem and employed a mechanism consisting of a **counter-rotating third wheel** to increase **stability**
  - Designed a custom **Solidworks model** for the **mount** and the **wheel** to get it manufactured
- **Chaotic circuits in encryption** (Course Project)
  (Prof. Punit Parmananda , Autumn 2017)
  - **Presented** a paper on the **implementation** of simple **chaotic circuits** as **random number generators** for **sound encryption**
  - **Simulated** the circuit on **Python** employing **built in functions** based on **RK4 algorithm** and observed the system for different **parameter** values
- **Remote controlled multi terrain bot -XLR8**
  (Electronics and Robotics Club, IIT Bombay : Autumn 2016)
  - **Designed** and **engineered** an **application controlled 4-wheel bot** using **differential mechanism** which completed the competition racetrack
  - **Fabricated** a **ball picking and dropping mechanism** on the bot to deliver a ball to a desired location
- **RSA encryption** (Course Project)
  (Prof. Bernard Menezes, Autumn 2016)
  - Demonstrated **RSA encryption and decryption** by designing functions to perform **Modulo addition, multiplication and exponentiation, GCD and inverse Modulo n**
- **Analyzing the temperature trend** (Course Project)
  (Prof. Vikram Rentala , Autumn 2017)
  - **Objective :** To generate a **Histogram** from a given set of data collected by **Berkeley Earth** using **Python**
  - **Analyzed** the obtained histogram to report a trend in the **variation of temperature** and its **distribution**.

TECHNICAL SKILLS

- **Languages:** C++, HTML, CSS, Python
- **Software packages:** Arduino, AutoCAD, Solidworks, LaTeX
- Familiar with Git and Jekyll

POSITIONS OF RESPONSIBILITY

- **Convener, Maths and Physics Club** *2017*
  - **Collaborated** with a team of 5 other conveners and 1 manager to promote and inculcate curiosity in Maths and Physics in the institute
  - Helped **design and ideate** the **question papers** for various **quizzes** like Bazinga Physics and Logic GC and in **smooth execution** of **club events**
  - Learnt the **necessary skills** for **managing and maintaining** the **club website** such as **HTML** and basic **CSS** along with **Jekyll** and **Git**
- **Co-ordinator, Pronites Division, Mood Indigo** *2017*
  - Working in **team of 20** and responsible for execution of concerts with **footfall 20,000**
  - **Ideated** and **revamped** the structure for **Livewire**, **India's largest and oldest semi-professional band event** and the flagship event of **Mood Indigo**
  - Lead a team of **20+ organisers** to execute India's largest student organized concerts attended by a **crowd of 20,000**

COURSES UNDERTAKEN

- **Physics:** General Relativity*, Astrophysics*, Special Relativity, Data Analysis and Interpretation, Quantum Mechanics-I*, Classical Mechanics, Nonlinear Dynamics, Digital Systems*, Electronics Lab I & II & III*, Thermal Physics, Introduction to Electronics, Quantum Physics and Application, Basics of Electricity and Magnetism, Waves and Oscillations*
- **Maths:** Numerical Analysis*, Linear Algebra, Calculus, Real Analysis, Complex Analysis, Differential Equations I & II
- **Miscellaneous:** Introduction to Economics, Introduction to Programming with C++, Engineering Drawing

** - To be completed by May 2018*

EXTRACURRICULAR ACTIVITIES/ HOBBIES

- Conceptualized and edited the video that won the **3rd place** in **Music Video Competition, Freshiezza, 2016**
- Successfully completed one year of training in **NSO Volleyball**
- Part of the **School Cricket Team** that won **Under-14 Giles Shield Plate Division, Mumbai**
- Interested in **film appreciation** and **understanding cinema**, mainly **psychological thrillers**
- Learnt some basic **French** in high school
- Interested in football, reading, badminton, music