



Avinash Kumar Singh
Aerospace Engineering
Indian Institute of Technology Bombay

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UG Third Year (B.Tech.)
Male
DOB: 01/01/2000

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2021	6.85
Intermediate/+2	Swami Harsewanand Public School	Swami Harsewanand Public School	2017	89.60
Matriculation	Swami Harsewanand Public School	Swami Harsewanand Public School	2015	10.00

SCHOLASTIC ACHIEVEMENTS

- Achieved **98.50 percentile** in **JEE Main** examination, among over 1.14 million candidates (2018)
- Secured **96.99 percentile** in **JEE Advanced** examination, among 0.15 million candidates (2018)
- Selected among **40** students to pursue a **Minor** degree in department of **CSR Engineering** (2019)
- Pursued a minor course, **Understanding Design (DE 415)**, under Industrial Design Centre (2020)

KEY PROJECTS UNDERTAKEN

Data Analysis of IPL Dataset | Data Analysis & Interpretation | Course Project (Apr '19)

Project Guide : Prof. Prabhu Ramachandran, Aerospace Engineering Department, IIT Bombay

- Analyzed **IPL** dataset of several years by using various **Python** libraries like **Matplotlib** & **NumPy**
- Used **Pandas** library to import data from various sources and predicted the winner of a particular season by analysing data of various parameters such as **Net run rate** of a team at a particular stage
- Introduced the concept of **Luck Index** in predicting the chance of a particular team to reach the finals by analysing parameters, such as runs scored by a batsman on No balls delivered by the bowlers

Remote Controlled Bot Project | Electronics & Robotics Club, IIT Bombay (Aug '18)

- Built an App controlled four wheeler bot capable of showing atleast two degrees of freedom in space
- Used **ATtiny micro controller** to program the movement of the bot and sync it with the application on the mobile phone using a **bluetooth module** and Lead Acid battery was used to power the bot
- Competed in the **XLR8** event conducted by the Student Technical Activities body using the bot and succeeded in completing all the tasks such as **rotating disc and spiral staircase and marble dash**

Shunya House Project | Team Shunya, IIT Bombay (Feb '19 - Present)

- Working in a team comprising of **50+** engineering and architecture students, guided by **9+** professors
- Researching to build a **solar-powered house** incorporated with the root principles of **sustainable existence** with the vision to sustainably meet the growing demand for **urban housing** in India
- Brainstormed in the **ideation of core concept** laying out the foundation of new Team Shunya house

POSITIONS OF RESPONSIBILITY

Department Head | National Service Scheme, IIT Bombay (April '20 - Present)

NSS is the largest student volunteer body working in the field of social service in IIT Bombay

- Supervising the **YouTube channel "Tarang"**; making it more content-driven accounting for a **boost in subscriber count** by **30%**, **40k+** minutes of total watch-time, **36.6k+** **views** and still counting
- Heading a **two-tier** team of **Nine** Activity Associates and **100+** volunteers for the community service
- Handling the blog page, **Parivartan**, & for increasing our reach, adding the link of blogs in the description of the videos, with similar content, posted on the department YouTube channel **Tarang**
- Responsible for grading **100+** volunteers for two compulsory freshmen courses, **NOCS01** & **NOCS02**
- Organised **Flare**, an intriguing series of online competitions and social hackathons, during the pandemic of **COVID-19** with the themes such as **Earth after Corona** and **Musings in Quarantine**

Activity Associate | National Service Scheme, IIT Bombay

(April '19 - Mar '20)

NSS is the largest student volunteer body working in the field of social service in IIT Bombay

- With a team of **9 members**, mentored **90+** volunteers for their **sustainable & social development**
- Handled YouTube channel Tarang, made it more content-driven, accounting for **50% m-o-m** growth
- Executed visits in **15+** BMC School & nearby NGOs to inculcate the idea of sustainability & organised the event, **Eco-Friendly Ganesha**, promoting awareness while celebrating Ganesh Chaturthi festival
- Involved and directed the volunteers in several **donation campaigns** like Cloth Collection Campaign and collected around **4000+** kg of clothes to donate those to several NGOs & many other needy ones
- Directed and scripted the **street play**, performed every year by the NSS volunteers on Republic Day, highlighting the ongoing issues related to **mental health** of students & providing plausible solutions

Coordinator, Food & Beverages | Mood Indigo, IIT Bombay

(Sep '19 - Dec '19)

Asia's Largest College Cultural Festival | Footfall: 143,000+ | 230+ events | 1700+ colleges

- Dealt and negotiated with **10+ food brands** to generate the **sponsorship worth INR 3 Lakh**
- Ideated the set up of **3 food courts** at different locations in the institute by collaborating with over **25 food and beverage brands** to cater competition participants and the visitors at the college fest
- Led a team of **20+ organizers** catering to food and beverage requirements of volunteers, judges for competitions, and celebrities at **10+** venues across the four-day festival at the entire institute campus

EXTRA CURRICULAR ACTIVITIES

Social	<ul style="list-style-type: none">• Volunteered for the National Service Scheme, IIT Bombay and spent 80+ hours volunteering under the Sustainable Social Development subdivision with the vision of promoting sustainability in our common daily life practices (May '18 - Apr '19)• Volunteered for the National Innovation Club to educate 50+ farmers and 100+ school students about the ill irrigation practices in the district of Talegaon; spreading awareness about scientific methods of farm watering techniques (Jul '18 - Dec '18)
Cultural	<ul style="list-style-type: none">• Represented Hostel-3 in Arcade Street Play to spread awareness about Women Empowerment in society and also received a special mention from the judges (Oct'18)• Performed in Street Play General Championship, Organised by IIT Bombay cultural, to represent Hostel-3 & secured Second Position among all other hostels (Jan'19)• Active participant in Gyrations(Annual inter hostel dance championship) (Oct'19)
Misc.	<ul style="list-style-type: none">• Presented business ideas as a part of weeklong EnB Buzz Competition organized by Entrepreneurship and Business Club of Entrepreneurship Cell, IIT Bombay (Aug'18)• As a part of the Hostel-3 Crossy team, ran 5 kilometres and secured First position among all other hostels in Crossy General Championship organized by IITB sports (Oct'19)• Played in Hostel-3 Cricket League and was a member of the Runner-up team (Feb' 20)

TECHNICAL SKILLS

Software	MATLAB, AutoCAD, L ^A T _E X
Programming & OS	C/C++, Python, Windows
Other tools	MySQL, HTML

KEY COURSES UNDERTAKEN

Aerospace Engineering :	Mathematics & Misc. :	Others :
Incompressible Fluid Mechanics,	Linear Algebra, Calculus,	Engineering Graphics & Drawing,
Data Analysis and Interpretation,	Differential Eqn, Economics,	Basics of Electricity and
Solid Mechanics, Spaceflight	Introduction to Electrical and	Magnetism, Quantum Physics
Mechanics, Compressible Fluid	Electronics Circuits, Introduction	and application, Computer
Mechanics, Aircraft Propulsion	to Numerical Analysis	Programming & Utilization