



Shyam Iyer
Engineering Physics
Indian Institute of Technology Bombay

190040116
UG Second Year
Male
DOB: 18/10/2001

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2021	8.74
Intermediate/+2	HSC	Pace Junior Science College	2019	92.00
Matriculation	ICSE	G. D. Somani Memorial School	2017	97.60

Pursuing **Honours in Physics**

ACADEMIC ACHIEVEMENTS

- Awarded a **Change of Branch** to the department of **Engineering Physics** among 8 out of 1000+ students owing to exemplary academic performance in the first year of study (2020)
- Conferred with an **AP Grade** in the course BB 101 Biology for Engineers given to the **top 2%** (8 out of 565) in the entire freshman batch for exceptional performance in the course (2019)
- Secured **98.46 percentile** in JEE Advanced Examination 2019 among 0.16 million candidates (2019)
- Achieved **99.43 percentile** in JEE Main Examination 2019 among 1.1 million candidates (2019)
- Awarded **School Runner-up Topper** and **Highest Marks in Science** for the ICSE Examinations (2017)

PROJECTS

InstiDelivery | Institute Technical Summer Project

Mar '20 - Jun '20

Part of a 4-member team which designed and simulated a Drone Delivery system over the course of four months

- Completed a **four month** long project on developing an Autonomous **Drone Delivery** infrastructure for delivery of packages within IIT Bombay campus using **Robot Operating System (ROS)** in Ubuntu Linux
- Simulated three quadcopters in **Gazebo Simulator** to deliver packages over a maximum distance of **2.0 km**
- Constructed a complete **virtual model** of IIT Bombay campus as a testing ground for the drone simulation using satellite data from Open Street Maps in 3D rendering software **Blender**
- Designed a website using **Django** backend along with a real-time tracking system via **Bing Maps** in **JavaScript**
- Selected in the **Top 3** projects out of **64** teams after rigorous evaluation by the Institute Technical Council

Game Theory | Summer of Science

Apr '20 - Jun '20

Self learning project mentored by an experienced senior under the Maths and Physics Club of IIT Bombay

- Learned key concepts of Game Theory such as **Nash Equilibrium**, **Backward Induction**, Evolutionary and Behavioural Game Theory and their applications in decision making
- Studied lecture video content of the online course ECON 159 Game Theory offered by **Yale University**
- Documented my learnings in a **10,000** word report and analysed a **case study** on Discussion in Game Theory

Junior Dynamics Engineer | Team Hyperloop IITB

Jan '20 - Aug '20

Part of a 30 member team involved in designing and building a functioning prototype Hyperloop pod

- Worked on the **COMSOL Multiphysics** platform to develop simulations of **magnetic brake models**
- Pursued research on the high-velocity lateral control efficiency of **Electrodynamic Wheels (EDW)**
- Designed friction cum magnetic array brakes for the design packet submission which got shortlisted for the **final round** at the **Arizona DesertLoop** competition and symposium

KEY COURSES

Physics:

Quantum Physics and Applications, Basics of Electricity & Magnetism, Classical Mechanics*, Special Theory of Relativity*, Data Analysis & Interpretation*, Non-Linear Dynamics*

Mathematics:

Calculus, Linear Algebra, Complex Analysis*

Miscellaneous:

Biology for Engineers, Computer Programming and Utilization, Economics*, Digital Systems*

* to be completed by November 2020

TECHNICAL STRENGTHS

Programming Languages

C++, Python, Java, JavaScript, L^AT_EX, ROS

Web Development

HTML, CSS3, Bootstrap

Software

Solidworks, AutoCAD, COMSOL, Adobe Photoshop, Adobe Premiere Pro

LEADERSHIP AND ORGANISATIONAL EXPERIENCE

Literary Arts Convener | Institute Cultural Council, IIT Bombay

May '20 - Present

Part of a 6-member council responsible for organising Literary Arts events for a 10,000 strong student community

- Created content for **40+** campaigns increasing the club's online presence **8 fold** over the COVID-19 quarantine
- Coordinated **15 events** under the flagship Battle of the Batches clocking **12+ hours** with **200+ participants**
- Ideated, curated and hosted the first ever Online General Quiz among **30 top quizzers** over a virtual medium
- Assisted in executing **750+** matches for the Inter-Institute Scrabble League, coordinating between **370+** participants from **6 IITs** and ensuring timely match completion and information dissemination.
- Presented the club to **1200+** PG Freshmen at the Cultural Orientation by conceptualising a video and contributing a voice-over; interviewed **6 seniors** to capture and convey their sentiments for the club
- Responsible for maintaining the college quizzing blog which amassed over **80,000+ hits** in two months
- Conducted extensive research on **10+** college festivals throughout the country and prepared a report with fresh ideas in order to reinstate IIT Bombay's **Literarium** with a budget of **1.4 Lakh**

Publicity Coordinator | Techfest, IIT Bombay

May '20 - Present

Working in a team of 8 to publicize Techfest and its various events to 2500+ colleges across India

- Managing and writing content for social media accounts namely Facebook (**3 million+** followers), Instagram (**42.5K+** followers), Twitter (**18.7K+** followers) and LinkedIn (**14K+** followers) for Techfest
- Led a team of **20+** CAs coordinating with **2K+** schools to bring in participation for the Techfest Olympiad
- Managing a College Ambassador Program with **8000+** CAs from institutions across the country
- Prepared a database of content creators on **YouTube** and contacted them for discussing a partnership proposal

Deputy Head Boy | G. D. Somani Memorial School

May '16 - Mar '17

Part of a 10-member head council elected to represent the student community

- Managed a **40** member student council to redress grievances of the **1000+** student strong community and maintain decorum within the school campus

EXTRACURRICULAR ACTIVITIES

Quizzing and Literary Arts	<ul style="list-style-type: none">• Awarded Par Excellence in Quizzing in 2016 and 2017 at G.D. Somani Memorial School for exceptional performance in representing the school at various quizzes• Stood 3rd place at the National Finals of Aqua Regia 2015, certified by Guinness World Records in 2007 as India's Largest Science Quiz• Stood 1st place at Ignite IT Quiz organised by HR College of Commerce and Economics• Qualified to the quarterfinals in the Institute Scrabble League out of 80+ participants• Participated in the Jamnabai Narsee School Cascade National Debate in 2016
Social Work	<ul style="list-style-type: none">• Raised funds for the Terry Fox Foundation towards cancer research at the Tata Memorial Hospital and participated in the Terry Fox Run for Cancer in 2014, 2015 and 2016• Visited the Leprosy Mission Trust Vocational Training centre in Nashik, Maharashtra in 2016 to gain awareness about leprosy rehabilitation and donated grains to the centre
Culturals	<ul style="list-style-type: none">• Participated in a group hip-hop performance in the opening act of the Institute Salsa Night 2019 in front of a crowd of 500+ attendees• Played the Acoustic and Bass Guitar in multiple school bands over three years
Sports	<ul style="list-style-type: none">• Completed a year-long training in Athletics through the National Sports Organization• Certified Green Belt holder by the Shotokan Karate-Do International Federation
Miscellaneous	<ul style="list-style-type: none">• Attended a week long Quantum Computing workshop focused on implementing IBM Qiskit organised by the Maths and Physics Club of IIT Bombay• Attended a two-day long workshop on Quantitative Trading and System Building using Python organised by Quantify Capital, and won first place for Best Report• Served as Event Coordinator at G.D. Somani Memorial School in 2015-16• Successfully completed a specialised training in Soft Skills at a professional workshop conducted by Dr. DPN Prasad in 2015