Tejas Bhalla
Electrical Engineering
Indian Institute of Technology, Bombay

190070066
B.Tech.
Gender: Male
DOB: 26-07-2001

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2023	

Pursuing a **Minor** in **Applied Statistics and Informatics** from the Department of Mathematics, IIT Bombay

Scholastic Achievements

- Shortlisted among the **top 30** students in the **Asia-Pacific region** to be part of a **3 day Quantitative Trading Camp** conducted by **Jane Street** to explore market making and the real-world application of statistics and probability *(2021)*
- Secured **All India Rank 109** in **JEE Advanced** and **All India Rank 108** in **JEE Main** *(2019)*
- Among the **Top 1% Nationally** in **National Standard Examination in Physics, Chemistry and Astronomy, Regional Maths Olympiad** and **Zonal Informatics Olympiad** out of over 55,000 candidates *(2018)*
- Awarded the **Kishore Vaigyanik Protsahan Yojana (KVPY) Fellowship** by DST, GOI *(2018, 2019)*
- Recipient of the **National Talent Search Examination (NTSE) Scholarship**, awarded by NCERT *(2017)*

Professional Experience

Derivatives Research Intern | Alpha Derivatives, Mumbai *May 2021 - November 2021*

- Tasked with creating a thoroughly **Backtested Trading Strategy** with well-defined **Entry and Exit criteria**
- Refined the strategy by introducing precise criteria for the management of **Risk, Trade, Position, and Money**
- Learnt about **futures and options**, how to price options in accordance with the **Black-Scholes Model** and assessing the sensitivity of options to changes in parameter values by using "**The Greeks**"

Research and Development Intern | SPACE X VIEW Pte. Ltd, Singapore *June 2021 - July 2021*

- Worked with a team of **5** co-interns to create the **first prototype** of a system of controllable buoys capable of oceanic data collection and transmission for building real-time models that help the **Japanese Fishing Industry**

Larsen & Toubro Defence | AUV-IITB | DST IMPRINT II.C *March 2020 - Present*

The aim of this project is to develop an Underwater Remotely Operated Vehicle (ROV) for **mid-sea inspection & surveillance**

- Wrote a **serial driver to interface** with the Single Board Computer to control the thrusters and pneumatic actuators
- Involved in **creating a simulator** to perform testing of the ROV in an underwater environment

Major Project

Matsya, Autonomous Underwater Vehicle (AUV) *September 2019 - Present*

RoboSub, AUVSI & US Office of Naval Research *Guide: Prof. Leena Vachhani, Prof. Hemendra Arya*

AUV-IITB is an all-student team working on the design and development of a **state-of-the-art AUV**, capable of navigation, smart decision-making and object detection enabling it to autonomously **perform realistic naval tasks in marine conditions**

Accolades: 2nd Runner-up in video presentation at Robosub 2020 | Young Researchers' Prize at IEEE OES

Software Sub-Division Head *June 2021 - Present*

- Spearheading a **3-tier, 9 member** multidisciplinary team for the design and development of Matsya 6A
- Working on modelling **Wind-Generated Ocean Waves** according to the **Pierson-Moskowitz Spectrum** in **Gazebo**

Software Developer *October 2019 - May 2021*

- Developed a **logging system** to **store the data** enabling a **restart of the vehicle** in case of an unexpected shutdown
- Modelled the **timeout function** to account for **non-uniform acceleration** providing a **better estimate** of the time taken
- Implemented an algorithm to perform frame transformation of **acceleration data from the IMU** to the **frame of the vehicle**
- Co-authored a **Technical Design Report (TDR)** on Matsya 6 for RoboSub 2020 and 2021

Positions of Responsibility

Academic Mentor | DAMP, EE Department, IIT Bombay *June 2021 - Present*

- Selected as part of a **35 member** team out of **86 applicants** on the basis of exhaustive peer reviews and interviews
- Mentoring and guiding **8 sophomores** to help them strike a balance between academics and extracurriculars

Summer of Science Mentor | Maths and Physics Club, IIT Bombay *May 2021 - July 2021*

- Mentored **5 students** on **Stock Market Analysis** and **Financial Mathematics** by providing resources for research and solving any queries they faced during their research

Key Courses Undertaken

Statistics	Introduction to Probability Theory, Introduction to Derivative Pricing, Statistical Inference*
Online Courses	Financial Market Analysis, Competitive Strategy, Trading Basics

** To be completed by November, 2021*

Extracurriculars

- Completed all 6 levels of the **IPA Speed Arithmetic Programme** conducted by **Ideal Play Abacus**
- Actively learning **chess** and solving puzzles with a special liking for **Killer Sudoku and Slitherlink**

Scholastic achievements and extracurricular activities are not verified by the Placement Cell