

Pursuing a **Minor** degree in **Data Science and Artificial Intelligence** at **C-MInDS**, IIT Bombay

## SCHOLASTIC ACHIEVEMENTS

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- Awarded Branch Change to Mech Engg. (**39** out of **1400+** freshmen) for an excellent academic performance (2022)
- Secured Department Rank **15** among **200+** undergraduates in the department of Mechanical Engineering (2022)
- Among top **1** percentile in **JEE Advanced 2021** examination out of **2,50,000** candidates all over India (2021)
- Secured **99.61** percentile in **JEE Main 2021** exam out of **1.1 million** eligible candidates all over India (2021)
- Procured **AIR 13** in **Techkriti Open School Championship** conducted by Techkriti, IIT Kanpur (2018)

## KEY PROJECTS

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### Automating 2048 game using Reinforcement Learning

(Dec 22 - Present)

*Winter in Data Science(WiDS), Analytics Club*

- Implementation of Machine Learning Models with **Convolutional Neural Network (CNN)** to train the model
- Using Supervised Learning, **Deep Reinforcement Learning Models** and various python libraries for implementation
- Conducted extensive experimentation to tune the hyperparameters of the reinforcement learning algorithm
- Developed a deep understanding of reinforcement learning principles and their application to real-world problems

### Data Analysis of Indian Premiere League

(Nov' 22)

*Course Project : DS 203 | Prof. Amit Sethi*

- Performed extensive Exploratory Data Analysis of Indian Premiere League using two different datasets
- Used various libraries like **Seaborn** and **Matplotlib** to create meaningful charts and graphs to communicate findings
- Conducted statistical analysis to identify significant differences in team and individual player performance across various metrics like best partnerships, most wickets, most centuries and percentage wins batting first
- Created a report in **IEEE** format presenting all our findings and also expressing our views on the same

### Student Wellness Center Portal

(Jun'22 - Sep'22)

*An EMR software for creating and managing appointments for students and counsellors*

- Developed a **web app** from scratch, using **Angular** as a front-end and **Django framework** for the back-end
- Implemented **Angular Material UI** and used its various elements for a much easier and more profound user experience
- Utilized **Django REST API** to get methods like **POST**, **PUT** and **GET** to add, change, or receive data from the database
- Created login page using **Firebase Auth** and integrated **Google API** for creating events in Google Calendar

### Web Development Projects

(Aug' 22 - Dec' 22)

*Web Team | Institute Technical Council*

- Created a portal for the Freshers' Technical Orientation 2023 using **ReactJS** and ExpressJS, successfully connected the frontend to Google Sheets to show the data received, using the various functions of **Axios**
- Developed the AddBill page of the **Bill Reimbursement Portal** and used **React** hooks to implement required features
- Contributed in various other websites and portal including **Tech Points Portal** and **Certificate Portal**

### Space Vader Game

(Apr' 21)

*A shooting game built in python*

- Created an interactive action game, including multiple different game modes based on difficulty with a **live score** count
- Programmed the whole game from scratch in Python using its **game development** library Pygame
- Implemented the major concepts in python like **Object Oriented Programming**, Iterations and **os library**
- Utilized **Pygame** library for functions like playing sound, adding a live score and choosing between difficulty modes

## Obstacle Maneuvering Bot

(Aug' 22)

XLR8 | Electronics and Robotics Club

- Constructed a **Wifi-controlled** bot with differential mechanism using **ESP 8266** Wi-fi microchip for **XLR8**
- Designed obstacle avoidance algorithm in **Arduino IDE** and controlled **L293D** motor driver with it
- Acquire essential skills like soldering, and worked with perforated boards, **headers** and multimeter

## POSITIONS OF RESPONSIBILITY

### Web Convener | Institute Technical Council

(Jun' 22 - Present)

*The Council responsible for overseeing all technical activities at the institute*

- Part of a 6-member team responsible for developing and maintaining websites of ITC's clubs and teams
- Developed various websites for events like **Technical Orientation 2022** and **Tech RnD Expo** (ITC's flagship event) using **ReactJS** for frontend to display information about the events.
- Revamped Institute technical council main website using HTML, CSS, JavaScript and Bootstrap for this tenure containing all the information related to the technical activities taking place under the council
- Represented the Web Team in front of **200+** PG freshers in the PG Orientation program explaining our team's role

### Web Convener | Insight

(Jun' 22 - Present)

*Media Body of IIT Bombay | Reach of 1.5 million+ | Readership: 350k+*

- Selected after rigorous testing, interview and intensive assignment evaluation among **20+** students
- Maintaining the Blog site of Insight, successfully uploaded **30+** blogs to the site including **Summer Blogs**
- Updating and Maintaining the **GS Meter** website showcasing the work update of each General Secretary.

## TECHNICAL PROFICIENCY

- **Languages & Skills:** C++ | Python | Java | HTML | CSS | JavaScript | Git | Bootstrap 5.2 | L<sup>A</sup>T<sub>E</sub>X
- **Software Tools:** Visual Studio Code | Photoshop | Arduino IDE | PowerPoint | Excel
- **Frameworks & Libraries:** Angular | Django | ReactJS | Numpy | Pandas | Scipy | Tensorflow

## COURSES UNDERTAKEN

<b>Mechanical Engineering</b>	Solid Mechanics, Fluid Mechanics, Thermodynamics, Structural Mechanics, Strength of Materials*, Mechanical Measurements*, Manufacturing Processes I*, Engineering Mechanics*, Solid Mechanics Lab*, Fluid Mechanics Lab*, Manufacturing Practice Lab*
<b>Maths &amp; Physics</b>	Introduction to Numerical Analysis*, Calculus I, Calculus II, Differential Equations I, Linear Algebra, Basics of Electricity & Magnetism, Quantum Physics and Application
<b>Miscellaneous</b>	Programming for Data Science, Introduction to Machine Learning*, Introduction to Electrical and Electronics Circuits, Computer Programming and Utilization, Economics

**Note:** Courses with (\*) are to be completed this semester

## EXTRACURRICULARS ACTIVITIES

<b>NSO &amp; Sports</b>	<ul style="list-style-type: none"><li>• Completed year-long training in <b>Badminton</b> under the National Sports Organisation</li><li>• Secured <b>17th</b> rank among <b>200+</b> participants in the Annual Half Marathon event</li></ul>
<b>Technical</b>	<ul style="list-style-type: none"><li>• Successfully completed a week long Data Science Boot Camp conducted by the Analytics Club</li><li>• Attended a 2 hour long Blockchain Workshop conducted by the Web and Coding Club</li><li>• Finished a <b>12+</b> hours course on Python basics including various libraries like os</li></ul>
<b>Miscellaneous</b>	<ul style="list-style-type: none"><li>• Participated in a Decrypt hunt competition involving reading various research papers</li><li>• Actively participated in the Inter House Quiz Competition held at the Annual Fest</li><li>• Assisted as a Volunteer for the execution of flagship events like Techfest'21</li></ul>