

# MOHD SAFWAN

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Currently working as a **Quantitative Researcher** for **Millennium Management**.

## EDUCATION

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**Indian Institute of Technology Bombay, Mumbai, India** — Graduated in June 2022  
B.Tech + M.Tech , Electrical Engineering (Communication and Signal Processing) GPA: **8.42/10**

## SCHOLASTIC ACHIEVEMENTS

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- . Secured **All India Rank 457 / Top 0.23%** in JEE Advanced 2017 out of *200,000* students.
- . Ranked in **Top 0.12%** students in JEE Main 2017 out of *1.2 million* students.
- . Was placed in **Top 1%** in National Standard Astronomy Olympiad and selected for INAO.

## WORK EXPERIENCE

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**Reinforcement Learning Intern** — [WinZO Games](#) Jan - Jun '22

- . Created a deep reinforcement learning algorithm for learning multiplayer board games via self play.
- . Wrote a complete learning framework for generic board games and deployed trained agents in production.

**Applied Scientist Intern** — [Matching Quality Team, Amazon](#) Summer '21

- . Built multilingual and multimodal deep learning based models to match products with search queries.
- . Optimized the training time by **75%** and achieved upto **10%+** gains in F1 scores over multiple locales.

**Co-founder, Technical Lead** — [Augle AI \(augle.ai\)](#) Jan '19 - Dec '20

- . Built and deployed multiple Imaging, Vision and AI solutions as APIs to various clients using **AWS services**.
- . Managed a team of more than 8 researchers and developers to iteratively improve our solutions.
- . **Won** Startup Jalsa 2019 and secured funding at **5.3 Cr** valuation. **Winner** of E Cell's Eureka IITB track.

**Finding Images/Videos using a Selfie** — [Freelance Project, Reels & Frames \(picsniff.com\)](#) Summer '20

- . Developed a solution to find all photos and videos of a person from a collection with **95%+ accuracy**.
- . Optimized the search time to a **few milliseconds** for searching in 1000 images with multiple faces in each.

## KEY PROJECTS

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**Parallelized Verification of Conjecture for Metric Dimension** — [C++](#), [CUDA \(Course Project\)](#) Spring '21

- . Wrote C++ code to verify the conjecture for metric dimension of a grid graph augmented with one edge.
- . Implemented own Hash Set on GPU due to lack of STL library and got **200x** improvement with CUDA.

**Tic Tac Toe Learning Environment** — [Reinforcement Learning \(Course Project\)](#) Autumn '20

- . Wrote an open source framework for evaluating game playing agents on tic tac toe game using websockets.
- . Added implementation of **Deep Q Network** agent and classic algorithms like MiniMax, AlphaBeta search.

**Petyr : An Open Source Python Library** — [Self Project](#) Spring '20

- . Developed a fast library for working with 2D geometric transforms with **300+** monthly downloads.
- . Wrote unit tests with full coverage with automated tests and build checking at every push using Travis CI.

## POSITIONS OF RESPONSIBILITY

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**Teaching Assistant** | Control Systems Lab, Digital Signal Processing Lab. 2021-22

**Convener, Web & Coding Club** | Conducted various boot-camps and competitions for the club. 2018-'19

**TSS Instructor** | Taught 100+ students Python and concepts of Object Oriented Programming. Autumn '19

**School of Science** | Mentored 4 freshmen in implementing basic DL algorithms from scratch. Summer '19

## EXTRACURRICULAR ACTIVITIES

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- . Volunteered in NSS to teach Mathematics to underprivileged children.
- . **Winner** of Cybersecurity Club's jeopardy style Capture The Flag competition 2020.
- . **2 Time National Winner**, IPL Auction Competition 2018 & 2019 by Entrepreneurship Cell.
- . **Won** TechFest's Coding Challenge Enigma with teams coming from colleges all over India.