

MOHD SAFWAN

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Received an offer for **Quantitative Researcher** role from **Millennium Management** (joining in July 2022).

EDUCATION

Indian Institute of Technology Bombay, Mumbai, India — Graduating in June 2022
B.Tech + M.Tech , Electrical Engineering (Communication and Signal Processing) GPA: **8.22/10**

SCHOLASTIC ACHIEVEMENTS

- . 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

Reinforcement Learning Intern — *WinZO Games* Summer '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

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.

Petryr : 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

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

- . 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.