Yash Mehta

Software Portfolio: devagio.github.io/yash_mehta
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EDUCATION

INDIAN INSTITUTE OF SCIENCE
BS+MS IN PHYSICS
With **Distinction**
Jul 2022 | Bengaluru

KEY COURSES

COMPUTER SCIENCE
Machine Learning
Signal Processing
Design and Analysis of Algorithms
Computational Physics
Numerical Differential Equations
Programming and Algorithms

MATHEMATICS
Probability and Statistics
Introduction to Analysis
Introduction to Linear Algebra
Mathematical Methods of Physics

SKILLS

PROGRAMMING
Python • Numpy • pandas
Scipy • Pytorch • Sk-Learn
Matplotlib • Tensorflow
C • C++ • Julia • MATLAB
Django • React.JS • JavaScript
HTML • CSS • Tailwind • SQL

CLUBS AND TEAMS
Athletics* • Dramatics* • Judo
Astronomy* • Music • Debate

* Founder or Convener

SIDE PROJECTS

2-Player Chess | Demo* | Code
Reinforcement Learning (Snake)
Pathfind Visualiser | Demo* | Code
Sorting Visualiser | Demo | Code
YruRU Website | Demo | Code
Mehta Website | Demo | Code
TicTactoe Social Media & API
Space Invaders | Demo* | Code
Hand Cricket | Demo | Code
Various Freelance Gigs

* Only optimised for Chrome

RELEVANT WORK AND RESEARCH EXPERIENCE

EPIPHANY AI-TECH PVT. LTD. | MUMBAI
Mar 2023 – Present
- Designed a **subscription-based application**, and created **10+ assistants** using open-sourced **Large-Language-Models** to provide user-friendly guidance for **finance, mental health**, etc.
- Modelled user data by implementing various **machine learning algorithms** to identify **key demographics** and **marketing strategies**, leading to a **60% increase** in quarterly revenue.

INDIAN INSTITUTE OF SCIENCE | BENGALURU
Jul 2021 - Feb 2023 | Advisor: Prof. Prateek Sharma
- **Analysed** $\sim$**1 Petabyte data** from the TNG simulations API, developed a model for cold gas clouds, and implemented a **segmentation algorithm** on Voronoi tesselation to identify them.
- **Publication**: Y. Mehta, A. Dutta, P. Sharma, D. Nelson, "Hot N Cold Gas in Illustris-TNG..."

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH | MOHALI
Dec 2020 – Jun 2021 | Advisor: Prof. Jasjeet Bagla
- Developed and implemented a numerical model to **simulate** the evolution of protostars.
- **Publication**: Y. Mehta, J. Bagla, J. Dutta, "Radiative Effects During Star Formation..."

MENTORING EXPERIENCE

CODE / ASTRO | CALTECH, PASADENA & NORTHWESTERN, EVANSTON
2021 - Present | Role: Teaching Assistant
- Mentored $\sim$70 students yearly on fundamental software engineering skills and best coding practices at Caltech, Pasedena (2021, 2022) and Northwestern University, Evanston (2023).

IOAA SELECTION AND TRAINING CAMPS | HBCSE, MUMBAI
2018 - Present | Role: Student Facilitator
- Mentored $\sim$30 country-wide top high school students each year to select the national team for the International Olympiad on Astronomy and Astrophysics (IOAA).

ACADEMIC AWARDS

Year	Rank	Award
2020	Top Quartile	Simon Marais Mathematics Competition merit list
2018, 2019	**Top 15 / 1000+**	**Madhava Mathematics Competition Merit List (2x)**
2018	Top 30 / 10K+	National Initiative on Undergraduate Science (NIUS) Fellow
2017	99.96 %ile	Joint Entrance Examination
2017	Top 250 / 50K+	Indian National Physics Olympiad Finalist
2017	Top 250 / 50K+	Indian National Chemistry Olympiad Finalist
2016	Top 30 / 50K+	Infosys Foundation Fellow
2016	**Int'l. Olympiad**	**Silver Medalist at Int'l. Olympiad on Astrophysics (IOAA)**
2016	**1st / 50K+**	**"Best Data Analyst" award at IOAA team selection**
2016	42nd / 100K+	Kishore Vaigyanik Protashan Yojana (KVPY) Fellow
2016, 2017	Top 250 / 50K+	Indian National Astronomy Olympiad Finalist (2x)
2015, 2016	**Top 250 / 50K+**	**Indian National Maths Olympiad Finalist (2x)**
2015, 2016	1st / 100K+	Technothlon Winner (2x)
2009, 2013	**1st / 100K+**	**SOF Maths Olympiad Winner (2x)**

MISCELLANEOUS ACHIEVEMENTS

- Broke the **Guinness World Record** for solving a Rubik's cube in team of two
- Achieved the **Top Rank** on Codewars, a popular competitive coding website
- Received a **Diploma** in the Indian Classical music instrument Tabla
- Created **award-winning strategies** (YruRU and Mehta) for speedsolving under constraints