Aadvik Mohta

Education

Ngee Ann Secondary School *Jan 2020 – Nov 2023*
Singapore-Cambridge General Certificate of Education Ordinary Level

- **Raw L1R5**: 6
- **Subjects:** Elementary Mathematics, Additional Mathematics, Pure Physics, Pure Chemistry, Pure Biology, Social Studies, Elective Geography, English Language and Hindi Language

Dunman High School *Feb 2024 – Present*
Singapore-Cambridge General Certificate of Education Advanced Level

- **Subjects:** H1 Project Work, H1 General Paper, H1 Hindi, H1 Economics, H2 Physics, H2 Mathematics, H2 Further Mathematics, H3 Mathematics

Awards

Singapore Physics League *August 2025*
Bronze Award
Singapore Biology League *August 2025*
Bronze Award
Singapore Mathematical Olympiad(Open Section) *July 2025*
Honourable Mention
Singapore Astronomy Olympiad *May 2025*
Bronze Medal
A*STAR Science Award(JC) *Oct 2024*
SINDA Excellence Award *Sep 2024*
Singapore Chemistry League *Aug 2024*
Silver Award
Singapore Mathematical Olympiad(Open Section) *July 2024*
Honourable Mention
Singapore Physics League(Senior) *July 2024*
Honourable Mention
Singapore Mathematical Olympiad(Senior Section) *July 2023*
Bronze Medal
Singapore Junior Physics Olympiad *July 2023*
Bronze Medal
Singapore Physics League(Junior) *July 2023*
Silver Award
Singapore Junior Chemistry Olympiad *July 2023*
Merit Award

Experience

Intern *Nov 2024 – Dec 2024*
*National GaN Technology Centre(NGTC), Insitute of Microelectronics, A*STAR*

- **Name of Project**: Programs for Anomaly Detection in Transistor Characteristics
- **Work Done:** Worked with machine learning algorithms (Isolation forest, Anomaly Score Map) to facilitate automated parameter extraction and detect anomalies in the large datasets generated from fully automated measurements.

Projects

Workshop on Neural Networks *May 2025*

As Part of the Dunman High School STEAM Week

- **Synopsis**: An introductory workshop on the theoretical basis of neural networks, with a focus on Convolutional Neural Networks and their applications in handwritten digit recognition.
- **Work Done:** Typed out lecture slides in LaTeXand wrote a simple python program to demonstrate how a Convolutional Neural Network is used to recognise handwritten digits.

Programs to Plot Transit Light Curves from WASP Photometry Data *July 2025 – Present*

- **Synopsis:** The data obtained from the Wide Angle Search for Planets(WASP) mission is available through the Miulski Archive for Space Telescopes(MAST). Data corresponding to certain exoplanets of interest were used to plot their transit light curves and compute the transit depth.
- **Work Done:** Wrote a python program that downloads TESS data for the exoplanet of interest, phase-folds and bins its light curve, plots the normalised transit plot, and estimates the transit depth.

Technologies

Languages: Python, TeX

Packages: LaTeX, Tensorflow, Numpy, Keras, Matplotlib, Pandas, Astropy