

# 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 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

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### 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  $\text{\LaTeX}$  and 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

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**Languages:** Python,  $\text{\TeX}$

**Packages:**  $\text{\LaTeX}$ , Tensorflow, Numpy, Keras, Matplotlib, Pandas, Astropy