Vishal Sai Vetrivel

Curriculum Vitae

DAE Disha, NIUS Scholar

Education

2008–2019	**AISSE**, *The PSBB Millennium School – CBSE*, Chennai, 88.6%
2019–2021	**SSCE**, *The PSBB Millennium School – CBSE*, Chennai, 94.4%
2021–2026	**Int. Msc (Physics)**, *UM DAE CEBS*, Mumbai, Overall CGPA - 8.41

- Semester 1 – 9.04 SGPA
- Semester 2 – 8.43 SGPA
- Semester 3 – 8.96 SGPA
- Semester 4 – 8.62 SGPA
- Semester 5 – 8.10 SGPA
- Semester 6 – 7.96 SGPA
- Semester 7 – 8.08 SGPA
- Semester 8 – 8.36 SGPA

Achievements/Milestones

2023	**NIUS Physics Camp 19.2**, *Summer Project*, TIFR (Mumbai) Digital pulse shaping of HPGe detector for neutron damage study.
2022	**NIUS Physics Camp 19.1**
2020	**RSIC – IIT Madras**, *(Canceled due to COVID-19 pandemic)*
2018	**Times Spark Scholar**
2017	**International Rank 1 in SOF NCO**
2016	**Summer Camp on Astrophysics and Astronomy**

Projects

July 2025	**Inversion of Internal Rotation Rate of Red Giants**, *TIFR*, Mumbai Prof. Shravan Hanasoge, TIFR, Mumbai
August 2024	**Helioseismic Inversion of Rotation Rate using RLS method**, *UM DAE CEBS*, Mumbai Prof. H M Antia, UM DAE CEBS, Mumbai
Winter 2023	**Reading Project on Development of a Novel Algorithm For Nuclear Level scheme determination** Nuclear Physics, **DNAP**, **TIFR**, Mumbai

Summer 2023	**Digital pulse shaping of HPGe detector for neutron damage study**

Nuclear and Computational Physics, Prof. R Palit, **DNAP**, **TIFR**, Mumbai
Developed an algorithm using CERN's ROOT to digitally correct the spectrum obtained from a neutron damaged HGPe detector which showed that there is likely a statistical correlation between rise times of pulses and neutron damage in spectrums under Prof. R Palit.

Languages

English Tamil	Native
Hindi	Intermediate
Japanese	Beginner (Currently Learning)

Computer skills

- 2016 – **Introduction to Modern Application Development (NPTEL)**, IIT Madras, Elite – 80%
- Proficient in Fortran, Rust, C#, Python, ROOT, NodeJS and tooling in Windows and Linux.
- Basic web development with Javascript, HTML, CSS.
- Various numerical methods for scientific computation.
- Expertise in Latex.
- Design knowledge using Canva and Adobe InDesign.
- Attended workshop on Android development during 4CCon - 2nd National Conference of Free Software Movement of India
- Most code published on Github. (Discord Bots [1] [2], Text Editors, Scientific Demos, etc.)
- Participated in Mindbox (2016–2018), HackerRank CodeRite (2019–2020), Advent of Code (2020–2023)

Interests

- Music (Drums): Certified at level 1 upto Grade 3 Trinity, Played in college band
- Debating and MUNs: Represented school and college at ISDS, Tandem, Brihaspati, Millennium MUN, IICM, etc.
- Elected responsibilities:
  - At School:
    - Director of the Debate Club - 2019–2020
    - Secretary of the Debate Club - 2020–2021
  - At College:
    - Student Committee Representative for the Science Club and the Literature Club
- Other Club Activities:
  - Member of The Science Club (`https://cbsscienceclub.github.io`)
  - Coordinator of the CEBS Lifestyle Instagram Handle (`https://instagram.com/cebs_lifestyle`)
  - Designer of the CEBS Novellus Annual Magazine
  - Founding Member of the Anime Club at CEBS