VARDAN CHETTRI

vardanchettri.sssihl@gmail.com +91 8900377238 Prabhat Tole, Sittong 3 Darjeeling, West Bengal

Profile:

Self-motivated Physics graduate currently pursuing an M.Sc. in Physics at SSSIHL**,** with a foundation in both theoretical concepts and experimental techniques.

I have spent extensive time working in experimental laboratories and have developed practical skills in Python (NumPy, Matplotlib, VPython, Pandas, Flask) through project-based work.

My hands-on experience includes developing a Python-based web application and synthesizing silver nanoparticles as a Lab-project. I am interested in integrating experimental results with physical understanding to develop scientific insights

---

Subject Exposure:

Mathematical Methods for Physics*, Classical Mechanics*, Classical Electrodynamics*, Quantum Mechanics*, Nuclear Physics*, Solid State Physics*, Thermodynamics*, Atomic and Molecular Spectroscopy *.

Electronics* , Microcontroller (8085)* ,

Computational Techniques in Physics. Python *

Laboratory Exposure:

Optics * , Electronics* , Mechanics *, Electromagnetism* , Python* , Microprocessor * [labs.]

Grating*; Michelson Interferometry*; Raman Spectroscopy *; X-Ray Diffraction (XRD) Analysis*; UV–Visible Absorption Spectroscopy*; Laser-Based Interference and Diffraction-

Experiments* ; Newton's Rings* ; Resistivity and Band Gap of Semiconductors Using Four-Probe Technique*,Millikan's oil drop*

Numerical Data Analysis, Curve Fitting and Visualization Using Python*

Projects:

Reflector Design for neonatal industry at Phoenix Medical Systems

A new hyperbolic Reflector for an Incu-Warmer (combination of infant incubator and warmer) was designed. **2 months' internship.** The problem statement given to me was to design a new profile (a reflector) which can be used for a specific equipment (**New Medical Equipment**) called incuwarmer.

Automation of Solar Panel

The Dual Axis Solar Tracker automatically adjusts solar panels using light sensors and a microcontroller to follow the sun's movement. **Won First Prize** for this project at **IIT Madras**.

Skills:

- Python
- Lab-View
- Automation
- Basic Scilab Simulation (MD)
- latex
- Arduino

Academic Exposure / Seminars Attended :

- **DIR-V program**, Indian Institute of Technology Madras
- Academic seminars delivered by researchers from **Tata Institute of Fundamental Research (TIFR)**
- **2-day** Industry-oriented technical seminars by **Analog Devices**

Coursework Seminars (presented) :

- *Coefficient of viscosity from kinetic theory of gases.*
- *Quantum particle in a spherically symmetric potential.*
- *Brewster's angle and polarization by reflection.*
- *Millikan's oil drop experiment.*

Qualification:

M.Sc. Physics – 2nd semester (current)

1st semester: Grade - **8.2**

B.Sc. Physics (Hons) - SSSIHL [Grade - A]

Personal Information:

Date of Birth: Jan 3rd 2003

Nationality: Indian.

Languages: English, Hindi

Hobbies: Photography, Colour Grading (image enhancing)

Address: Prabhat Tole, Sittong 3 Darjeeling, West Bengal

Interests:

- Neuro physics
- Lasers
- Image Processing