Profile

A dedicated, detailed, capable research fellow with one year of experience in a postgraduate research project on Computational Condensed Matter. A confident presenter who approaches the problem right from the basics and is able to explain complex information to audiences of all levels by drawing analogies from everyday events.

Professional Experience

Master's Thesis
Machine learning based band gap screening for ultrathin materials ⧉
Feb 2020 – Jun 2021

Indian Institute of Technology Indore, India

Advisor: Dr Sudip Chakraborty,

Reader in Physics, Harish Chandra Research Institute (HRI) Allahabad

My work was based on understanding the relatively unexplored field of predicting ultrathin 2D materials with certain energy band gaps involving the use of machine learning. During the course of this work, I attempted to use the application of machine learning in the Density Functional Theory (DFT) simulations. I learned the physics behind DFT and the calculation of ground state energies and electronic structures of different materials using Kohn-Sham equations (K-S Potentials).

Awards

IIT-Joint Admission Test for Masters
2019
All India Rank- 340

National Graduate Physics Examination,
Indian Association of Physics Teachers
2019
State Topper

References

Dr Vikas Sharma, *Assistant Professor*, Doon University
vsharma.ph@doonuniversity.ac.in

Dr Himani Sharma, *Head of Department-Physics*, Doon University
hsharma.ph@doonuniversity.ac.in

Vardhman Dwivedi

📍 A-407 Maple Tree Apartment,
New Jail Road,
462038 Bhopal, India

✉ vardhman.dwivedi@gmail.com

📞 +91 9719910440

Education

Master of Science, Physics,
Indian Institute of Technology
2019 – 2021 | Indore, India
GPA 8.62

Bachelor of Science (Honours), Physics, *Doon University*
2016 – 2019 | Dehradun, India
GPA 8.54

Coursework

Advanced Quantum Mechanics, Advance Mathematical Physics, Solid State Physics, Classical Dynamics, Finite Element Method, Numerical Methods, Modern Physics, Analog System and Applications, Electricity and Magnetism, Waves and Optics, Electromagnetic Theory, Thermodynamics and Statistical Mechanics.

Language

English: Bilingual proficiency

Hindi: Native

French: Elementary proficiency