

# Nishil Mehta

📍 Indian Institute of Science, Education and Research - Thiruvananthapuram, Kerala, India

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## EDUCATION

**Major: Physics**  
**Minor: Data Science**

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|------|--|
| 2023 | <b>BS-MS Dual Degree (present)</b><br>Indian Institute of Science Education and Research, Thiruvananthapuram ☑<br><b>8.42 CGPA</b> |
| 2018 | <b>12th - Maharashtra State Board of Secondary and Higher Secondary Education</b><br>Fergusson College, Pune. ☑<br><b>91.85 %</b>  |
| 2016 | <b>10th - Secondary School Certificate</b><br><i>Sinhgad Spring Dale School, Pune</i><br><b>94.2/100</b>                           |

## RESEARCH EXPERIENCE

|                              |   |
|------------------------------|---|
| August 2022 – June 2023      | <b>IISER-TVM, NISER</b><br>Major Project<br>Guide: Dr. Liton Majumdar, Dr. Soumen Basak<br><ul style="list-style-type: none"><li>• <b>Exoplanets</b><br/>Theory and Observations</li></ul>  |
| January 2022 – July 2022     | <b>IISER-TVM</b><br>Minor Project<br>Guide: Dr. Shabnam Iyyani<br><ul style="list-style-type: none"><li>• <b>Data-Driven Astronomy</b><br/>Analyzed Gamma-ray Bursts data from telescopes such as AstroSat, Fermi, and Swift and implemented Machine Learning techniques for data classification.</li></ul>   |
| <b>NISER</b>                 |   |
| December 2020 – Present      | Project Intern<br>Guide: Dr. Liton Majumdar<br><ul style="list-style-type: none"><li>• <b>Modeling of Astrophysical objects</b><br/>Physical, chemical, and radiative transfer modeling of prestellar core L1544.</li></ul>   |
| January 2020 – December 2020 | Project Intern<br>Guide: Dr. Liton Majumdar<br><ul style="list-style-type: none"><li>• <b>Astronomical Spectroscopy</b><br/>Computation of the spectroscopic constants of molecules found in the Interstellar Medium using Quantum chemistry software and further analysis.</li></ul>   |
| May 2019 – July 2019         | <b>IIT - BOMBAY</b><br>Summer Internship<br>Guide: Dr. Alok Shukla<br><ul style="list-style-type: none"><li>• <b>A Deep Learning Study of the Potential Energy Surfaces of Small Triangular Molecules.</b><br/>Quantum Calculations using Machine Learning (Neural Networks).<br/>Reduced the computational cost by implementing machine learning (Neural Networks) to calculate the potential energy using fewer data and more accuracy.</li></ul> |
| August 2018 – November 2018  | <b>IISER-TVM</b><br>Semester Project<br>Guide: Dr. Ullasa Kodandaramaiah and Dr. Hema Somanathan<br><ul style="list-style-type: none"><li>• <b>Effects of water from different sources on microbial community.</b></li></ul>  |

## PROFESSIONAL EXPERIENCE

October 2021 – present      **Managed Network Expert**  
Chegg India  
Subject Expert: Advanced Physics (Freelance)

## SKILLS

### Programming

Python, C++, C, R, Fortran, Solidity (Basic)  
JavaScript (Amateur), Assembly Language (Intel 8085),  
Mathematica and MATLAB

### Technical Skills

Slurm - Cluster computing, Machine Learning, Neural  
Networks, Ethical Hacking (Amateur)

### Data Analysis

SQL, ALMA archive data analysis using CASA

### Software

Ab initio software (Psi4, Quantum espresso, Gamess,  
Gaussian), Radiative Transfer (Radmc3D, Mollie, LIME),  
Gas-grain chemistry code (Nautilus)

## AWARDS

### International Astronomy and Astrophysics Competition

Received Bronze honor in the final round of the International Astronomy and Astrophysics Competition and was placed among the top 20% of all participants.

### INSPIRE (Innovation in Scientific Pursuit for Inspired Research) Scholarship

Department of Science and Technology (DST), Government of India.

## LEADERSHIP EXPERIENCE

### Co-Founder and Club Co-ordinator of Parsec, The Astronomy Club of IISER-TVM.

Administered the working of the club and developed the club website.  
Organized events and handled the social media for the club.

### Physics Expo Head

Oversaw the working of the Physics expo and assisted in organizing Anvesha, the annual science festival of IISER-TVM.

## REFERENCES

### Dr. Liton Majumdar

Assistant Professor, **NISER**;  
Visiting Scientist, **NASA JPL**.  
liton@niser.ac.in

### Dr Shabnam Iyyani

Assistant Professor Grade I, **IISER-TVM**  
shabnam@iisertvm.ac.in

### Dr. Soumen Basak

Associate Professor, **IISER-TVM**  
sbasak@iisertvm.ac.in

### Dr. Alok Shukla

Professor, **IIT-BOMBAY**.  
shukla@phy.iitb.ac.in

## INTERESTS

### Skating

- Represented India at *World Slalom Skating Association* ☑ at China.
- Represented India at Thailand Slalom Association and **secured 3rd rank**.

### Programming

Organised Hackathons at IISER-TVM. (Code Battle, Error 404)

### Cryptocurrency Enthusiast

Blockchain, DeFi, Metaverse, and Web3.0 with basic skills in Smart Contract Development.