

# Nishil Mehta

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

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## EDUCATION

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

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

## RESEARCH EXPERIENCE

August 2022 – June 2023	<b>Major Project, IISER-TVM</b> Guide: Dr. Liton Majumdar, Dr. Soumen Basak <ul style="list-style-type: none"><li>• <b>Exoplanets</b> Theory and Observations</li></ul>
January 2022 – July 2022	<b>Minor Project, IISER-TVM</b> Guide: Dr. Shabnam Iyyani <ul style="list-style-type: none"><li>• <b>Data-Driven Astronomy</b> Analyzed Gamma-ray Bursts data from telescopes such as AstroSat, Fermi, and Swift and implemented Machine Learning techniques for data classification.</li></ul>
December 2020 – Present	<b>Project Intern, NISER</b> Guide: Dr. Liton Majumdar <ul style="list-style-type: none"><li>• <b>Modeling of Astrophysical objects</b> Physical, chemical, and radiative transfer modeling of prestellar core L1544.</li></ul>
January 2020 – December 2020	<b>Project Intern, NISER</b> Guide: Dr. Liton Majumdar <ul style="list-style-type: none"><li>• <b>Astronomical Spectroscopy</b> 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>Summer Internship, IIT - BOMBAY</b> Guide: Dr. Alok Shukla <ul style="list-style-type: none"><li>• <b>A Deep Learning Study of the Potential Energy Surfaces of Small Triangular Molecules.</b> Quantum Calculations using Machine Learning (Neural Networks). 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>Semester Project, IISER-TVM</b> Guide: Dr.Ullasa Kodandaramaiah and Dr. Hema Somanathan <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

### Software

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

### Technical Skills

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

### Data Analysis

SQL, ALMA archive data analysis using CASA

## 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.