

# Pranav Sreeganesh

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## Objective

Motivated second-year BS-MS student at IISER Tirupati with a strong interest in string theory, mathematical physics, group theory, algebraic geometry, theoretical physics, topology, knot theory, astrophysics and cosmology. Seeking opportunities to contribute in the fields of theoretical physics and mathematics.

## Education

### BS-MS Dual Degree Programme, May 2029 (Expected)

Indian Institute of Science Education and Research, Tirupati

**CGPA:** 9.0/10

### Class XII, 2024

Padma Seshadri Bala Bhavan Senior Secondary School, Siruseri

**Percentage:** 94.4%

### Class X, 2022

Padma Seshadri Bala Bhavan Senior Secondary School, Siruseri

**Percentage:** 98.4%

School Topper in Science

## Skills

**Technical:** Python, C, LaTeX, NumPy, Pandas, AstroPy

**Soft:** Problem-solving, teamwork, critical thinking

## Extracurricular Activities

- Member of IISER Tirupati Astronomy and Physics Clubs; participated in stargazing events.
- Winner of National Level Art Competition.
- Organized and conducted school science quizzes.

## Projects and Research Interests

**High School Project:** *Refractive Indices of Various Materials* (Science Exhibition). Measured refractive indices using Snell's Law and lasers.

**Synthesis of Soap:** Experimented with soap-making using saponification, analyzing ingredient effects.

**Seminar: Asteroids and Mitigation:** Delivered a seminar on asteroid detection and deflection techniques.

**Research in Astrobiology:** Exploring extremophiles, biosignatures, and habitability on other planets.

**Research in Gamma-Ray Bursts:** Investigating short gamma-ray bursts' origins and role in cosmic evolution.

## Summer Internships

### Reading Project on Graph Theory

Mentor: Dr. Subhash B, IISER Tirupati

May 2025 – July 2025

Focused reading on trees, connectedness, coloring, and fundamentals using Diestel's *Graph Theory*.

### Intro2Astro 2025 – Summer Research Program

Mentors: Dr. Fei Dai and Dr. Howard Isaacson

June 2025 – Present

Observational astronomy, celestial coordinates, stellar classification, exoplanets, and Python-based data handling.

**IISc Winter School of Physics** — Completed with a certificate of evaluation.

## References

Available upon request.