Pranav Sreeganesh

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Objective

Motivated second-year BS-MS student at IISER Tirupati with a strong interest in astrophysics, cosmology, astrobiology, photonics, and particle physics. Seeking opportunities to contribute to research in short gamma-ray bursts, particle physics, and the universe's evolution.

Education

BS-MS Dual Degree Programme, May 2029 (Expected) **CGPA:** 8.9/10
Indian Institute of Science Education and Research, Tirupati

Class XII, 2024 **Percentage:** 94.4%
Padma Seshadri Bala Bhavan Senior Secondary School, Siruseri School Topper in Physics

Class X, 2022 **Percentage:** 98.4%
Padma Seshadri Bala Bhavan Senior Secondary School, Siruseri 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 *May 2025 – July 2025*
Mentor: Dr. Subhash B, IISER Tirupati
Completed a focused reading project on graph theory, covering trees, connectedness, coloring, and other fundamental concepts using Diestel's *Graph Theory*.

Intro2Astro 2025 – Summer Research Program *June 2025 – Present*
Mentors: Dr. Fei Dai and Dr. Howard Isaacson
Part of an international collaborative research initiative introducing observational astronomy and astrophysical methods. Covered:

- Basics of astronomy – celestial coordinate systems, stellar classification, exoplanets
- Python for astronomy – data visualization, basic scripting, handling astronomical datasets

References

Available upon request.