Balakrishnan M

Diploma in Electronics and
Communication Engineering | 2nd year

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Summary

Electronics and Communication Engineering diploma student aspiring to pursue a career in astronomy and astrophysics, with hands-on experience in space-related projects, web development, and electronics. Interested in applying programming, electronics, and scientific knowledge to astronomy and space science.

Education

- Diploma in Electronics and Communication Engineering — Sankar Polytechnic College, Sankar Nagar | DoTE, Tamil Nadu — 2025 - Present
- SSLC (Class 10) — Private Candidate | Tamil Nadu State Board — 2024 - 2025

Skills

Technical Skills

Python | Matplotlib | SQL | Microsoft Excel | Astronomy Data Analysis | Basic Astronomical Instrumentation

Soft Skills

Science Communication | Public Speaking | Critical Thinking | Problem Solving

Internship

Def-Space Summer Internship | Bharat Space Education Research Centre (BSERC) | India | Jun 2026 – Aug 2026

Internship details

Certificate

- Developed an autonomous solar-energy tracking and receiving system using Arduino, LDR sensors, a servo motor, and a solar panel.
- Implemented automatic receiver alignment using sensor-based tracking inspired by Space-Based Solar Power.
- Applied embedded systems and robotics concepts during a 6+ week space technology internship.

Projects

Celestial Gallery — Astronomy Web Application | HTML • CSS • JavaScript

- Developed an astronomy web application presenting curated celestial objects and scientific information through organized gallery and information pages.

Virgo Constellation Data Analysis — Visual Star Map & Statistical Analysis | Excel • Matplotlib

- Collected a small dataset from an image of the Virgo constellation captured by the Hubble Space Telescope and performed statistical analysis of its star population.

Certifications/Courses

Certificates

- Nuclear Astrophysics | NPTEL | IIT Roorkee | Jan - Mar 2026
- Python Programming | Priya Computer Education | Tirunelveli | Mar - May 2026
- Developing Soft Skills and Personality | NPTEL | IIT Kanpur | Aug - Oct 2025

Achievements

- 1st Prize — Paper Presentation, 13th ISTE Annual Polytechnic Students Convention | Sankar Polytechnic College | Mar 2026