

ATREYI DASGUPTA

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EDUCATION

BITS Pilani, Hyderabad Campus

Integrated MSc in Physics

2021–2025

CGPA: 7.71/10

Indian Institute of Technology, Bombay

2024–2025

Master's Thesis: Real-time analysis of continuous satellite data streams for Gamma Ray Burst detection and reporting

SKILLS

Data & Analytics: SQL, Python (Pandas, NumPy, Matplotlib, SciPy), Statistical Analysis, EDA, Data Cleaning

Visualisation & Tools: Tableau, Excel, Jupyter, Git, Linux/Bash

Core: Data Pipeline Design, Reporting, Process Improvement, Stakeholder Communication

PROJECTS & EXPERIENCE

Netflix Content Analytics Dashboard — Personal Project

2026

View Dashboard

- Designed and queried a **SQLite database of 8,800+ titles** using advanced SQL — window functions, CTEs, subqueries — to extract content trends across genres, countries, and release years
- Built an **end-to-end EDA pipeline in Python** (Pandas, Matplotlib) uncovering key patterns: 70%+ content shift to movies post-2015, regional content concentration across 5 geographies
- Created a **Tableau dashboard** visualizing content distribution, top genres by region, and yearly growth — structured for non-technical stakeholder consumption

Real-Time Data Pipeline & Reporting System — IIT Bombay (Master's Thesis)

2024–2025

- Owned end-to-end development of a **real-time monitoring pipeline** processing 24/7 satellite data streams with automated SQL-based querying and alert triggering for high-priority events
- Redesigned **2 core data workflows**, reducing system failures and cutting reporting turnaround time by **~35%**
- Authored **13+ time-sensitive analytical reports** used by international research teams for rapid follow-up decisions — 6 as first author, published in the GCN

Solar Event Classification & Analysis (Remote) — UC San Diego

2024

- Analyzed datasets spanning **120+ solar flare events** to identify and classify short-duration flare activity using statistical simulations and Monte Carlo modeling
- Produced **12+ visual summaries** (light curves, trend plots) to support collaborative decision-making across a distributed research team

Multi-Frequency Signal Analysis — IIT Bombay (Krittika)

2023

- Applied **MCMC statistical modeling** and noise-filtering to isolate meaningful trends from large multi-frequency radio astronomy datasets across 15+ observation sessions
- Collaborated with a **6-member cross-functional team** to translate quantitative findings into documented insights

LEADERSHIP & MANAGEMENT

President — Ad Astra Astronomy Club, BITS Hyderabad

2023–2024

- Led a **50+ member organisation** — set priorities, delegated ownership, and tracked execution across simultaneous projects and events
- Delivered a **1,500+ attendee Chandrayaan-3 landing event**; managed end-to-end logistics and stakeholder communication

Project Mentor — Krittika Summer Project, IIT Bombay

2024–2025

- Mentored **5+ students** through structured weekly reviews; helped break open-ended problems into measurable milestones and deliverables
- Provided feedback on prioritization, documentation, and clear communication of outcomes

ACHIEVEMENTS & RECOGNITION

Silver Honour, International Astronomy and Astrophysics Competition (IAAC)

Invited Speaker, TEDx Community Meet, BITS Hyderabad

Guest Speaker, VIT Chennai — talk on Neutron Star Mergers attended by 80+ participants

Guest Speaker Gnaanu Education