Triptesh Acharjee

Roll No.: 234678
B.Sc (Hons) in Physics
Fergusson College (Autonomous), Pune

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Education

- **Fergusson College (Autonomous), Pune** *2023-2027(expected)*
  B.Sc (Hons) in Physics CGPA: 8.09/10.00
- **Jusco School Kadma, Kadmal** *2021-2023*
  Pre-University Studies Percentage: 63.6%
- **Carmel Junior College** *2011-2021*
  Secondary Studies Percentage: 80%

Skills

Languages: English, Hindi, Bengali, Marathi, Punjabi
Programming Tools: Python, Java, HTML, LINUX, LaTeX, MYSQL
MS Office: MS Word, MS Excel, MS Powerpoint
Soft Skills: Public Speaking, Diplomacy, Decision Making, Adaptability, Delegation, Analytical Thinking, Critical Thinking, Research
Coursework: Mechanics, Thermodynamics, Optics, Electrodynamics, Nuclear Physics, Astrophysics, Cosmology, Quantum Mechanics, Particle Physics, Nuclear Physics, Correlation, Data Analysis, Data visualisation, Petrology, Optical Properties of Minerals, Study of megascopic and microscopic rocks
Areas of Interest: Radio Astronomy, Data Analysis, Astrophotography, Telescope Handling

Experience

- **Workshop on Data Analytics by IDIA and BRICS** *May 2025 - June 2025*
  Workshop Attendee
  Graded: 89/100
  – Learned about the Foundations of Data Analytics.
  – Learned about the Programming and Tools.
  – Learned about the Data Visualisation and Data Cleaning, and Preprocessing
  – Completed a Capstone Project regarding Lightkurve using TESS data and secured a 89 Grade point.

- **Workshop on Astrophysical Dust Ices: Insights from Recent Telescopes by PRL** *March 2025*
  Workshop Attendee
  – Learned about the Astrophysical Dust Ices.
  – Learned about the current trends in observational Cosmology.

- **Workshop on Radio Astronomy by NCRA** *March 2025*
  Workshop Attendee
  – Learned about the Astronomical data by different radio observatories.
  – Learned about the current trends in observational Cosmology.

- **43rd Meeting of the Astronomical Society of India** *February 2025*
  Workshop Attendee
  – Attended talks and seminars on the current trends in Indian Astronomy and Astrophysics by eminent scientists.
  – Presented a Research Poster on "Accelerating Astronomy: An Unified Data Access".

- **Cosmology From Home** *June 2024*
  Workshop Attendee
  – Attended lectures on various aspects of Cosmological research.
  – Gained hands-on training with various theoretical and computational tools.

- **Indian Institute of Remote Sensing- IIRS (Org: ISRO)** *January 2024*
  Workshop Attendee
  – Learned about Remote Sensing.
  – Learned about.

- **Frontiers in Physics** *2024, 2025*
  Volunteer and Workshop Attendee

– Incharge for Technical Team.
– Attended Lectures on Optical and Radio Astronomy, Attosecond Physics, Spectroscopy and Semi-Conductors.

- **IUCAA National Science Day** *2025*

  Volunteer and Workshop Attendee

  – Created and presented a 1:50 scale model of the SKAO.
  – Attended lectures on Astronomy, SETI, Unexplained Mysteries, and Solar Physics and attended Q-A sessions with IUCAA's eminent scientists.

- **Astro Club Poster Exhibition** *2024, 2025*

  Volunteer

  – Presented Posters and Models on Planetary Missions and Concepts related to Electrodynamics.

Projects

– **Detecting Stellar Variability through Periodogram Modelling using TESS Light Curves** *May 2025 - July 2025*

  * Status: Completed
  * Tools & technologies used: Python
  * Analysed and classified variable stars visible from BRICS nations using TESS photometric data. Implemented time-series preprocessing, outlier removal, and variability modelling via Lomb-Scargle periodogram to identify stellar periodicities. Extracted key features such as amplitude, mean flux, and standard deviation to support further classification. Demonstrated strong skills in astrophysical data handling, exploratory analysis, and scientific visualisation using Python libraries like `matplotlib`, `pandas`, and `astropy`.

– **Accelerating Astronomy : An Unified Data Access** *November 2025-Present*

  * Status: Paused
  * Tools & technologies used: Python
  * Developing a secure application to centralize, organize, and visualize international physics research papers with advanced search and categorization tools. .

– **Monitoring Heat Wave Conditions Using WBGT Index** *May 2024*

  * Status: Complete
  * Tools & technologies used: WBGT Software for data analysis, R
  * This project focuses on collecting and analyzing heat stress data using the Wet Bulb Globe Temperature (WBGT) index at Fergusson College. The study involves measuring key environmental parameters such as air temperature, globe temperature, wet-bulb temperature, and dew point to assess the intensity of heat waves. Data is collected systematically over a defined period and plotted to visualize trends and variations in heat stress levels. The analysis aims to evaluate the impact of extreme temperatures and identify potential risks associated with heat exposure. The findings can contribute to better heat management strategies and awareness regarding thermal stress in outdoor environments.

Achievements

– **Poster Exhibition By Astro Club, Fergusson College** *2023,2024*

  Participant
  * 1st position in 2024
  * 3rd position in 2023

– **Scienceporium at Little Flower School, Jamshedpur** *2022*

  Participant
  * 3rd Position

Hobbies and Interests

– **Writing:** Quotes
– **Music:** Proficient in playing the Guitar
– **Sports:** Swimming, Waterpolo, Cricket, Badminton, Tennis, Football, Kabaddi
– **Reading:** Science Fiction, Fantasy, Non-Fiction, Self-Improvement