

Tejaswini Samanta

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EDUCATION

Miranda House College, University of Delhi

BSc Mathematics (Honours)

GPA: 9.3/10

North Campus, Delhi, India

Aug. 2024 – (Expected Graduation) Aug. 2027

- Relevant Coursework: Linear Algebra, Calculus, Real Analysis, Statistics and Probability, Data Analysis and Visualization, Differential Equations, Programming Using Python, Digital Empowerment, Science and Society
- Organisations: Start-Up Division Executive at Entrepreneurship Cell, Member at Sankhya (Mathematics Society)

EXPERIENCE

DataGen Scholar: Selected out of 1/300 globally.

Feb. 2025 – Present

SANDAI

Remote

- Gain experience with SQL, cloud computing, and cloud storage applications like Microsoft Azure and Amazon Web Services and Gen AI tools like ChatGPT, Gamma, Murf.AI, and Synthesia. Skilled in data visualization.
- Pursuing 3 industry certifications via DataCamp: Data Literacy, AI Fundamentals, and ML Scientist career track.

Student Researcher; Science Internship Program (SIP)

June 2023 – Aug. 2023

University of California, Santa Cruz

Remote

- Researched on one FRB sightline, the FRB20211203A, known to intersect a nearby (≈ 20 Mpc) galaxy group and infer the nearby galaxy group's contribution to the FRB dispersion from public photometry and distances to galaxies.
- Analyzed Gemini/GMOS spectra of galaxies and estimated the spectroscopic redshifts. This research project will factor into the FLIMFLAM survey furthering our understanding of ionized gas distribution in cosmological distance scales.
- Invited to Life and Space Conference 2023 (Polish Astrobiology Society) and Harvard Science Research Conference '23.

Girls Who Code : Summer Immersion Program

August 2024

Girls Who Code | Morgan Stanley | MetLife | Bank of America | Accenture

Remote

- Developed hands-on skills, collaborated with peers and industry professionals and explored a game design curriculum.
- Programmed 2 games from scratch and organized the school's first Scratch programming competition.

TECHNICAL SKILLS

Languages: Python, SQL, Mathematica, LaTeX, R

Frameworks: HTML, CSS, React, Node.js, WordPress

Tools: Tableau, Power BI, Google Analytics, Git, VS Code, Figma

Libraries: Pandas, NumPy, Seaborn, PyTorch, scikit-learn, Matplotlib, Astropy, Scipy

PROJECTS

GAIA App ↗ | Python, PyTorch + library : PSutil + matplotlib, Figma

September 2024

- GAIA, a server manager, a middleman app between server providers and our clients - small and medium businesses - which would allow for a better sharing of server resources and also help limit the energy usage of the servers.
- It schedules them to turn on and off using an AI and divide server usage between different clients while assuring privacy, cost minimisation, and energy efficiency.

phishingDetector ↗ | Python, PyTorch + library : PSutil + matplotlib, Figma

September 2024

- Developed an ML model to detect phishing links by analyzing URL attributes like IP type, length, shortening service usage, and domain age, and classifies them as legitimate or phishing (trained on 300+ URLs).

X-RayVision: Pneumonia Detection ↗ | PyTorch, CNN

April 2025

- X-RayVision leverages deep learning in PyTorch by fine-tuning a pre-trained CNN to classify X-ray images, distinguishing between healthy individuals and those with pneumonia.

HONOURS

1st place in Case Study Competition - Ada Lovelace Day '24: Department of Computer Science, Miranda House UniHack 2024 by ProjectSet: 1st place Global Winner among 107 participants and 48 teams in CSR track.

AI4GOOD INCUBATOR by Teens in AI and Sage: Global 2nd Place Winner; won USD 300 cash prize

Student Space Congress '23 by NewSpace Chicago: Global High School Winner; won USD 500 cash prize

IRIS National Fair Finalist 2024: Physics and Astronomy category award by the Govt. of India

Best Functional Website Award: The Stanford Daily - Tech Journalism Program (USD 2180 Scholarship)

Solving for Humanity Challenge: Proposal won 4th globally with 2800 votes in 132 countries; presented to UNDP

Bronze Award Winner by ClimateScience Olympiad 2024: Proposal was in Top 50 out of 2700+ proposals

Manmade climate change | News Article | Yale Daily News | Summer Journalism Program 2023

WOMANIUM AstroBiology: Special Mention, Global Finalist; Top 6/300+ teams amid UG/PG/PhD academics.

Manthan - Deep Dive into Ideas: Winner; presented to Jaipuria Institute of Management, awarded Rs 2000 cash