Ankur Sharma

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Professional Summary

- PhD in Physics with 7+ years of experience in data-intensive scientific research and statistical analysis.
- Experience with deep learning architectures and key components of machine learning workflows for data-driven analysis.
- Strong communication skills through teaching & supervision, outreach, [publications ↗], and cross-disciplinary collaboration.
- Open to data-driven roles in consulting, research, or education where analytical thinking and scientific rigor are valued.

Core Skills

Programming & Libraries: C, C++, Python, Bash; Pandas, NumPy, SciPy, Scikit-learn, TensorFlow, PyTorch, Matplotlib, Seaborn

Scientific Tools & Frameworks: HDF5, ROOT, Git, LaTeX, Jupyter, GammaPy

Data Science & Analysis: Statistical modeling and hypothesis testing; Machine learning for complex datasets; High-dimensional data representation; Simulation and predictive modeling

Domain Expertise: Large-scale scientific data pipelines; Real-time alert and decision systems; Scientific software development

Experience

Subject Expert, ScaleAI ↗ (Freelance)   *Remote | May 2025 – Present*

- Contributing as a freelance problem designer and evaluator for Humanity's Last Exam ↗, an advanced AI benchmark project.

Postdoctoral Fellow, Université Paris Cité (diiP ↗)   *Paris, France | Jun 2023 – Dec 2024*

- Adapted and extended self-supervised deep learning models to extract representations for astrophysical data analysis.
- Leveraged simulation tools and contributed code for modeling emission from astrophysical sources in open-source software.
- Worked with gamma-ray, neutrino observatories on analysis pipelines, representation modelling, and real-time alert response.

Postdoctoral Fellow, Uppsala University   *Uppsala, Sweden | Jun 2020 – Jul 2022*

- Formulated and tested astrophysical hypotheses using IceCube data, applying likelihood-based inference, p-value estimation, and binomial tests to identify statistical correlations.
- Supervised Master's students and delivered postgraduate-level course in particle physics.

Astronomy Educator, SPACE India ↗   *New Delhi, India | Dec 2015 – Jan 2017*

- Designed, delivered astronomy education programs with hands-on telescope use for educational institutions/ public outreach.
- Coordinated national scientific campaigns for students and conducted large-scale public engagement events

Education

Ph.D.	University of Pisa, Italy	**[Astroparticle Physics]**	2020
Integrated M.Sc.	IIT (ISM) Dhanbad, India	**[Applied Physics]**	2015
Erasmus Mundus	University of Porto, Portugal	**[Astronomy, Cosmology]**	2013–2014

Leadership & Outreach

- **2021–2022** — Member, **Engineers Without Borders-SWE ↗**: conducted feasibility study on solar cooking in sub-Saharan Africa.
- **2009–2014** — Co-coordinator, **Kartavya NGO ↗**: led education and healthcare initiatives for underprivileged communities.

Scholarships & Certifications

2025	**SQL for Data Science**, UC Davis (Coursera)
2013-2014	**Erasmus Mundus** INDIA 4EUII Masters Scholarship
2009-2014	**INSPIRE** Scholarship for Higher Education (Govt. of India)