

MEET VYAS

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EDUCATION

Ahmedabad University

B.Tech. in Mechanical Engineering with Minors in Physics and Mathematics (GPA - 3.28/4)

Gujarat, India

August 2020 – May 2024

PUBLICATIONS

- Brauer, Kaley and Dash, Aditya Prasad and Vyas, Meet J. and Massala, Ahmed Salim Stiven Briand. “From Simulations to Surveys: Domain Adaptation for Galaxy Observations”.
Machine Learning and the Physical Sciences Workshop @ NeurIPS 2025. 2025
- Terry, Sean K. et al. (incl. Vyas, M. J.). “Predictions of the Nancy Grace Roman Space Telescope Galactic Exoplanet Survey. IV. Lens Mass and Distance Measurements”.
arXiv:2510.13974. 2025
- Di Valentino, Eleonora et al. (incl. Vyas, M. J.). “The CosmoVerse White Paper: Addressing Observational Tensions in Cosmology with Systematics and Fundamental Physics”.
Phys. Dark Univ. 48, 101965. 2025
- Bambhaniya, Parth and Vyas, Meet J. and Joshi, Pankaj S. and de Gouveia Dal Pino, Elisabete M. “Retrograde Precession of Relativistic Orbits and the Quest for Charged Black Holes”.
Phys. Dark Univ. 48, 101949. 2025
- Andreoni, Igor et al. (incl. Vyas, M. J.). “Rubin ToO 2024: Envisioning the Vera C. Rubin Observatory LSST Target of Opportunity Program”.
arXiv:2411.04793 (Submitted to Astrophysical Journal Supplement Series). 2024
- Vyas, M. J. et al. “Experimental Investigation of a Concentrated Photovoltaic System Integrated With Water Sprinkler Generating Electricity and Hot Water”.
ASME GTINDIA2023, DOI: 10.1115/GTINDIA2023-118667. 2023

CONFERENCE AND POSTER TALKS

National Conference ARYA-2025 (Hybrid Mode) Poster Competition

SESTECH, Gujarat University

Theme - Statistics, AI&ML,

March 2025

Gas Turbine Conference 2023

American Society of Mechanical Engineers

Theme - Gas Turbine and Renewables

December 2023

SUMMER SCHOOLS

IAIFI Summer School 2025

MIT

Theme - AI and Statistics in Physics

August 2025

IAIFI Summer School 2024

MIT

Theme - AI and Statistics in Physics

August 2024

Zwicky Transient Facility (ZTF) Summer School 2024

University of Minnesota

Theme - AI in Cosmology

July 2024

Gravitational-Wave Astronomy

International Center for Theoretical Sciences, TIFR

Theme - Gravitational Wave Astronomy

July 2024

Fifth IUCSS Summer School

Indiana University, Bloomington

Theme - Lorentz- and CPT-violating Standard-Model Extension

May 2024

Zwicky Transient Facility (ZTF) Summer School 2023

University of Minnesota

Theme - Transients

July 2023

TECHNICAL SKILLS

Programming & Scripting: C/C++, Fortran, Python, R, MATLAB, Mathematica, Wolfram Language
Astronomy, Cosmology & Inference: Astropy, RTModel, PyLIMA, MulensModel, sncosmo, redback, Cobaya, CAMB, CLASS, DiscoDJ, CosmoMC
Statistical & Bayesian Inference: emcee, Bilby, dynesty, PyMC, Stan, corner.py, GetDist
Scientific Computing & HPC: CUDA, MPI, OpenMP, SLURM, OpenFOAM, Simulink, LabVIEW, LTspice
Machine Learning & Data Analysis: NumPy, SciPy, Pandas, Scikit-learn, PyTorch, TensorFlow, Weights & Biases
Large-Scale Data Processing: Dask, HDF5, FITS (cfitsio), PySpark
Numerical Methods & Optimization: SciPy Optimize, JAX, Autograd, Numba
Development & Reproducibility: Git, GitHub, GitLab, Docker, Conda, Make/CMake, Jupyter Notebook, pip
Testing & Debugging: PyTest, Valgrind, Wireshark
Scientific Writing & Visualization: LaTeX, BibTeX, RevTeX, Matplotlib, Seaborn, Markdown

EXPERIENCE

Research Intern	May 2024 – January 2026
International Centre for Space and Cosmology, Ahmedabad University	Gujarat, India
Undergraduate Teaching Assistant	October 2023 – March 2024
Ahmedabad University	Gujarat, India
Summer Intern	May 2023 – July 2023
Physical Research Laboratory	Gujarat, India
Physics Journal Club Coordinator	June 2021 – June 2022
Ahmedabad University	Gujarat, India
Student Ambassador	June 2021 – January 2022
Ahmedabad University	Gujarat, India
Undergraduate Peer Tutor	August 2021 – December 2021
Ahmedabad University	Gujarat, India

AWARDS AND HONORS

IAIFI Summer School 2025 Hackathon Winner: Best Group Effort	2025
We Are All Humans (WAAH) Research Intern Fellowship	2025
Outstanding Performance and Impact on Community Award by Ahmedabad University	2024
Travel Grant by the Heising Simons Foundation for the Rubin ToO workshop	2024
Travel Grant by Ahmedabad University for presenting my research at the ASME Gas Turbine India Conference 2023	2023

INTERNATIONAL COLLABORATIONS

Member of The Roman Science Collaboration	October 2025 – Present
Member of The COST Action Cosmoverse Working Groups 1,2, and 3	August 2025 – Present
Member of The Wide-Field spectroscopic telescope Science Team	July 2025 – Present
Member of The Roman Galactic Exoplanet Survey Project Infrastructure Team (RGES PIT)	March 2025 – Present
Member of Roman Wide Field Instrument Working Group	August 2024 – Present
Member of the LSST Transient and Variable Stars (TVS) Science Collaboration	July 2024 – Present
Member of the Cosmic Explorer Consortium	July 2024 – Present
Member of Rubin Undergraduate Network	July 2024 – Present

WORKSHOPS ORGANIZED

Roman Microlensing Data Challenge 25 AAS Workshop	RGES PIT
Theme - <i>Microlensing</i>	January 2026
Fourth Intermediate Python for Astronomical Software Development	TVS Science Collaboration LSST
Theme - <i>HPC, Parallelization, mpi4py, CUDA</i>	August 2025
Fourth TVS Software Workshop	TVS Science Collaboration LSST
Theme - <i>Science cases and practical aspects of using LSST data using Software</i>	March 2025

Third Intermediate Python for Astronomical Software Development*Theme - Unit Testing, Github Actions, Code Profiling***AI and Cosmology: Frontiers for the next decade 2024***Theme - AI and ML in Cosmology*

TVS Science Collaboration LSST

December 2024

ICSC, Ahmedabad University

*April 2024***WORKSHOPS ATTENDED****PhysCOS Second Early Career Workshop***Theme - NASA Science, missions, and careers*

NASA

*September 2025***Observatories Forum Workshop***Theme - Time Domain and Multimessenger Astrophysics*

AEON+ Collaboration

*September 2025***Rubin Community Workshop 2025***Theme - Rubin Science*

Legacy Survey of Space and Time

*July 2025***Shaping the Future of TIME DOMAIN ASTRONOMY in the Rubin Era***Theme - Time Domain Astronomy*

TVS Science Collaboration LSST

*May 2025***Spectroscopy Calibration Workshop***Theme - Observational Astronomy*

Roman Wide Field Instrument Calibration Working Group

*October 2024***Statistics meets ML in Particle Physics and Astrophysics***Theme - ML & Astrophysics*

PHYSTAT

*September 2024***Rubin Community Workshop 2024***Theme - Rubin Science*

Legacy Survey of Space and Time

*July 2024***Second Intermediate Python for Astronomical Software Development***Theme - Git, Software Development*

TVS Science Collaboration LSST

*July 2024***Utrecht Workshop on Philosophy of Cosmic Inflation***Theme - Philosophy of Astronomy and Cosmology*

Utrecht University

*May 2024***LSST ToO Workshop 2024***Theme - Gravitational Waves, neutrinos, solar system object detection*

Legacy Survey of Space and Time

*March 2024***CONFERENCES ATTENDED****Transients From Space***Theme - Transients*

Space Telescope Science Institute (STScI)

*March 2025***27th International Microlensing Conference***Theme - Microlensing*

South African Astronomical Observatory

*January 2025***Nancy Grace Roman Space Telescope Summer Conference 2023***Theme - Space Telescopes and Cosmic Exploration*

NASA

*June 2023***SUPERVISED FORMAL RESEARCH EXPERIENCE****Primordial Non-Gaussianity as a window to New Age Cosmology***Undergraduate Thesis**August 2023 – May 2024***Mechanical Model for Tracking the Optimized Foraging Pattern of Weakly Electric Fish Under Varying Conductivity***Behavioral Ecology**January 2023 – May 2023***Effect of Induction Heating on Temperature and Force Characteristics in Rotary Friction Welding***Metallurgy and Mechanical Applications**December 2022 – December 2023***Implementation of Scheduling Algorithms***Independent Project Course**July 2022 – June 2023***IoT-based Air Quality Sensor Network***Atmospheric Physics**March 2022 – August 2022***CERTIFICATIONS**

- [R Programming](#)
- [Matlab Fundamentals](#)
- [Control Design Onramp](#)
- [Machine Learning Onramp](#)
- [Gravitational Wave Open Data Workshop 6](#)
- [Gravitational Wave Open Data Workshop 7](#)

VOLUNTEERING

Khoj Museum | Environment

January 2021 – April 2021

- As a volunteer, I worked on ideas for sustainability under the domain of water conservation with the sub-domain of Technology and Innovation.
- I made a newsletter, came up with ideas for water sustenance, helped in developing a game based on water sustenance, came up with new technologies for water sustenance, and created activities for the same.