

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

Theme - Statistics, AI&ML,

Gas Turbine Conference 2023

Theme - Gas Turbine and Renewables

SESTECH, Gujarat University

March 2025

American Society of Mechanical Engineers

December 2023

SUMMER SCHOOLS

IAIFI Summer School 2025

Theme - AI and Statistics in Physics

MIT

August 2025

IAIFI Summer School 2024

Theme - AI and Statistics in Physics

MIT

August 2024

Zwicky Transient Facility (ZTF) Summer School 2024

Theme - AI in Cosmology

University of Minnesota

July 2024

Gravitational-Wave Astronomy

Theme - Gravitational Wave Astronomy

International Center for Theoretical Sciences, TIFR

July 2024

Fifth IUCSS Summer School

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

Indiana University, Bloomington

May 2024

Zwicky Transient Facility (ZTF) Summer School 2023

Theme - Transients

University of Minnesota

July 2023

TECHNICAL SKILLS

Programming & Scripting: C/C++, Fortran, Python, R, MATLAB, Mathematica, Wolfram Language
Astronomy, Cosmology & Inference: Astropy, RTModel, PyLIMA, MulensModel, snocosmo, 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 <i>International Centre for Space and Cosmology, Ahmedabad University</i>	May 2024 – January 2026 <i>Gujarat, India</i>
Undergraduate Teaching Assistant <i>Ahmedabad University</i>	October 2023 – March 2024 <i>Gujarat, India</i>
Summer Intern <i>Physical Research Laboratory</i>	May 2023 – July 2023 <i>Gujarat, India</i>
Physics Journal Club Coordinator <i>Ahmedabad University</i>	June 2021 – June 2022 <i>Gujarat, India</i>
Student Ambassador <i>Ahmedabad University</i>	June 2021 – January 2022 <i>Gujarat, India</i>
Undergraduate Peer Tutor <i>Ahmedabad University</i>	August 2021 – December 2021 <i>Gujarat, India</i>

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

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.