

Mahan Mirza Khanlari

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EDUCATION

University of Texas at Austin, Austin, TX

BS in Astronomy and Physics

Expected Graduation May 2024

RESEARCH EXPERIENCE

University of Texas at Austin, Department of Astronomy

Undergraduate Researcher, HETDEX, May 2023 - Present

Advisor: Karl Gebhardt

- Designed a pipeline with a combination of Supervised and Unsupervised machine learning to automat artifact removal from the HETDEX catalog. Reduced artifact detections by over ~2% per data release. Used in a variety of fields of research by HETDEX group members.
- Investigating HI gas around and in between LAEs at $z \sim 1.9-3.5$ with Lyman Alpha absorption.

SCHOLARSHIPS

SURF: Summer Undergraduate Research Funding, **University of Texas at Austin**, Department of Astronomy

\$2400 | May 2023-Aug 2023

POSTERS & PAPERS

- "HI column density around & between LAEs at $z \sim 1.9-3.5$ ", AAS243, New Orleans (Jan 2024) & UT Austin (Mar 2024) - Poster Presentations.
- Average Lyman Alpha Profile, Laurel Wiess et al.
- Upcoming paper on " HI column density around & between LAEs at $z \sim 1.9-3.5$ ", Date TBD.

PUBLIC OUTREACH

Astronomy Student Association, **University of Texas at Austin**, Department of Astronomy

Public Outreach Event, Enchanted Rock, TX, Oct 2022

- Provided telescopes for attendees, enabling direct observations of celestial objects including planets and nebulae.
- Offered detailed explanations and insights on the observed celestial objects, enriching the attendees' understanding and appreciation.

EXPERIENCE

University of Texas at Austin, Department of Astronomy

McDonald Observatory Student Assistant, May 2022 – Aug 2022

Supervisor: Anna Boxall

- Assisted in administrative tasks, including preparing and dispatching monthly mail correspondence to observatory donors.
- Updated member profiles, recorded donations, and managed communications, sending both weekly and monthly emails.

TECHNICAL SKILLS

- Programming: Python
- Machine Learning: t-SNE, Umap, PCA, TensorFlow
- Software: Photoshop
- Others: Astrophotography, Macro photography, Adult & Pediatric First Aid/CPR/AED

LANGUAGES

- English: Fluent
- Persian: Native