Jasmine Treviño

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EDUCATION

Coastal Bend Community College
Associate of Science *May 2022*
Awards: Dean's List

Texas A&M University – Corpus Christi
Bachelor of Science in Atmospheric Science, Minor: Applied Mathematics *Exp: Dec 2026*
Awards and Activities: Rising Scholar Award | Ruth A Campbell Scholarship | LSAMP Scholar | McNair Scholar

SKILLS

Programming & Development: Python, R, MATLAB, HTML, CSS, MS Excel/Word/PowerPoint, Linux, ArcGIS
Data & ML: Data preprocessing, Machine Learning (XGBoost, Random Forest), Statistical analysis, NetCDF handling.
Soft Skills: Detail-Oriented, Strong Work Ethic, Time Management, Team Collaboration, Technical Communication, Report & Presentation Preparation.

EXPERIENCE

Texas A&M University – Corpus Christi June 2024 – Present
NASA IPMSI Research Assistant

- Processed and quality-controlled large data sets (MRR-Pro radar and Disdrometer observations) using Python.
- Developed and compared AI models (XGboost and Random Forest) to improve rain rate estimation accuracy.
- Performed data alignment, cleaning, and preprocessing across multiple temporal resolutions.
- Built structured workflows for handling multi-source meteorological data and validating outputs.
- Wrote technical reports and visualizations for transparency on work progress.

KIII News Feb 2024 – April 2024
Broadcast Meteorologist Intern

- Translated complex atmospheric data into clear, accessible information for public communication.
- Delivered on-camera segments with emphasis on clarity and accuracy.
- Produced 5+ daily forecast graphics using numerical weather prediction model data.

Radiosonde Workshop [Texas A&M Uni. – Corpus Christi] June 2025 – June 2025
Intern

- Collaborated with a team to design and launch custom radiosondes equipped with 7 sensors for collecting meteorological data.
- Programmed Raspberry Pi Pico microcontrollers to capture and transmit real-time atmospheric profiles.
- Worked with a team to test, troubleshoot, and validate sensor performance.

PROJECTS

Improving Micro Rain Radar Rain Rate Retrieval in Different Precipitation Regimes Using AI Methods
June 2025-Dec 2025

- Developed ML models to improve radar-derived rain rate estimates across precipitation regimes.
- Built preprocessing pipelines to clean and structure atmospheric datasets for model training.
- Achieved up to a 70% improvement over baseline radar retrieval methods.
- Presented findings at the 106th American Meteorological Society (AMS) in January 2026.

Z-R Relationships Inferred from Rain Drop Size Distributions in Different Types of Rain Systems over Gulf of Mexico Coast June 2024 - Dec 2024

- Analyzed Disdrometer and radar datasets to evaluate variability in reflectivity – rain rate relationship (Z-R).
- Investigated data quality and measurement inconsistencies across precipitation types and instrument specific limitations.
- Presented research findings at the 105th American Meteorological Society (AMS) in January 2025.