

Sophie J. Preston
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Department of Neuroscience
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Education

Trinity University San Antonio, TX
BS Neuroscience, History minor, Anticipated Graduation 2027

Research Experience (750hr)

Trinity University, San Antonio

Undergraduate research; Advisor: Kwan K. Cheng 2024-Present

- Employed machine learning programs for the identification of Multi-target compounds to inhibit the aggregation of Tau Protein in Alzheimer's disease and the growth of ER+ breast cancer tumors
- Troubleshoot the Machine learning pipeline, creating a replicable system of AI-assisted tools for future project development

Presentations

- Trinity University undergraduate symposium
- UT-Austin Fall Undergraduate Research Symposium 2025
- Biophysical Society Annual Meeting 2026

Work Experience

Commission Sales Associate, Ruby Road Fall 2024-Present

- Studied under a GIA-certified gemologist for the identification and handling of rare gemstone species
- Interpersonal relationships with clientele, maximizing revenue, and establishing long-term professional relationships

Shadowing - The Woodlands, Tx (60hr)

2022-Present

St. Luke Hospital, Methodist Hospital, and Highland Health

Mentors: Dr. Lachterman, Dr. Qadir, and Dr. Young

- Shadowed physicians across different specialties, including cardiology, orthopedics, and family practice
- Gained first-hand insight into clinical decision-making, patient care, and the daily responsibilities of a practicing physician

Volunteer Experience

Gentiva hospice

Jan 2026 -Present

Advisor: April Bein

- Assist and provide companionship to patients under hospice care with terminal illness
- Administrative work, organizing paperwork, and home-in calls, arranging nurse visits and medications for patients

On Campus Involvement

ACS Chemistry Club, Vice President

Spring 2025-Present

- Organized visits to local elementary schools, showing chemical experiments, to inspire the younger generation's exploration of scientific fields
- Improved the social media accounts for improved recruitment of members

American Medical Student Association

Fall 2023-Present

- Collaborate with other Pre-medical students, creating a community for learning and post-graduate success
- Volunteer with local organizations, such as Mobile Eye Clinics, bringing healthcare to low-income areas

Grants and Awards

Murchison Summer Undergraduate Research Fellowship

2025

Trinity University, Summer Undergraduate Research Fellowship

Murchison Scholarship

2023-2025

Trinity University

Biophysical Society Travel Award

2026

Skills

Fluent reading and writing in Spanish

AI-Assisted Machine Learning

Python Coding

Macromolecule visualization

NMR spectroscopy

Dynamic Light Scattering

Confocal

Data Analysis in Excel