

# MADISON HOWARD

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## EDUCATION

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### Texas Tech University

Junior Undergraduate

Major in Professional Physics and Mathematics

*August 2018 - Present*

Cumulative GPA: 3.963

## EMPLOYMENT

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### STEM Peer Tutor

- *TECHniques Center, Texas Tech University*

*June 2020 - Present*

- Provided course-specific tutoring of math, physics and core course to undergraduate college students with learning disabilities in a peer-to-peer format

### Texas Tech University Student Housing

- *Social Justice Advocate*

*October 2018 - June 2020*

- Provided leadership and advocacy and conducted workshops in promoting advancement and development of diversity, multiculturalism, social identity, and social justice through training, community development, programming educational interactions, and educational dialogues within assigned student halls and associations.

## RESEARCH EXPERIENCE

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### Advanced Particle Detector Laboratory, Texas Tech University

- *Mentor: Nural Akchurin, PhD*

*June 2020 - Present*

- Created a secure network of Raspberry Pi's (**MQTT** and **SMTP**) embedded with thermodynamic sensors to build a modular distributed weather station to monitor the environmental conditions of the APD Lab.
- Developing a **MySQL** Database to create an interactive weather station dashboard (**React**).

### Department of Physics and Astronomy, Texas Tech University

- *Mentor: Joseph Romano, PhD*

*July 2019 - March 2020*

- Conducted statistical and image analysis on data from the Green Bank Observatory using **Python** on **Linux** in conjunction with the Pulsar Search Collaboratory and the TTU Physics Department

## AWARDS

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- The Bucy Undergraduate Scholarship in Physics (Spring 2020)
- Texas Tech University Undergraduate Dean's List (Spring 2020)
- Texas Tech University Undergraduate President's List (Fall 2018- Fall 2020)
- Henry C. Thomas Scholarship Award in Physics (Spring 2019)
- Raiders Who Rock: Community Service and Leadership Award (2019)
- The Bucy Undergraduate Scholarship in Physics (Spring 2020)

## STUDENT ORGANIZATIONS AND INVOLVEMENT

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- Secretary, TTU *Women in Physics* (Spring 2019 - Present)
- The Society of Physics Students
- The American Physical Society
- Association for Women in Mathematics
- STEM Undergraduate Colloquium Organizing Committee
- McLane Teammates Reading Group Fall 2019 - Spring 2020