TIMESTEP is offering a skills-based apprenticeship to University of Arizona students majoring in astronomy and/or physics. Many research opportunities and internships require prior experience utilizing coding and lab skills. This program will allow you to build technical and professional skills in a research environment, preparing you to be competitive for research positions and programs (ex. NASA Space Grant Fellowship, UROC, REUs, etc.) and/or a position in TIMESTEP’s Summer Tech Internship Program with a local employer.

**Program details:**

- Program runs September 2024 through April 2025

- Applications will be accepted from students who will be in their 2nd year of study (or equivalent) as an astronomy and/or physics major. Applicants must have already completed at least one of CSC 110, PHYS 105, or ECE 175, or an equivalent credit.

- Pay is for 5-10 hours per week @ $15.50 per hour

- You will attend weekly meetings/workshops with your cohort. Meetings will occur every Friday 1:00 – 2:30 pm.

- You’ll join a research group focusing on either: 1. Computing Research in Astrophysics, or 2. Hardware & Software in Astrophysics

- Work will focus on a variety of tasks and projects designed to build technical skills and research preparedness.

**Skills and Training:**

**CORE (completed by all interns)**

- Reading scientific papers
- Literature review & NASA Astrophysics Data System
- Linux Command Line
- Python
- Version control- Git, GitHub, Git Client
- Overleaf- LaTeX
- Debugging (reading error messages/Stack overflow)
- Visualizing data (Matplotlib)

**ADDITIONAL (project-dependent)**

- Networking (SSH)
- Creating block diagrams
- UA High Performance Computing (HPC)
- Computer vision (image processing-eg. OpenCV and some Scikit image processing features)
- Databases, SQL
- Drafting (r/t Solidworks, CAD)
- Basic optics
- Bayesian inference
- Machine learning (e.g. PyTorch)
- Instrumentation/lab skills- soldering, circuitry, signal generator, 3D printing, Raspberry pi & Arduino

Applications open Friday, April 19th and close at midnight Sunday, May 19th

Complete this application in Qualtrics: TIMESTEP Apprenticeship Program application

In advance:

1. **Prepare your resumé** to upload with your application. You must follow the Example Tech Resume format on our website under “Summer Tech Internship”. Be sure to include research experiences, significant class projects, technical skills (including programming languages & operating systems), jobs and clubs (including in high school).

2. **Get an unofficial transcript** from the Office of the Registrar to upload: Instructions for online access

Reach out to us at timestep@arizona.edu with any questions.