

Student Worker 3 – Sample Job Description**Job Title:** Undergraduate Research Assistant**Job Category:** Research**Hourly Rate:** Student Worker 3 (\$18.50/hour)**Job Description:**

The undergraduate research assistant will conduct research on reconstruction algorithms for cryogenic electron-microscopy (cryo-EM) in collaboration with a mentor. The goal of the research project is to perform reconstruction of flexible proteins from raw cryo-EM images. In particular, the candidate will investigate algorithms for estimating the covariance and contrast of structures of protein present in large cryo-EM datasets.

Duties include:

- Propose and analyze algorithms to process large datasets of images obtained by cryo-EM.
- Implement and test algorithms in python.
- Scale-up algorithms using GPU acceleration.
- Present results to collaborators.

Collaborate with the research software engineering team in the integration of code developed.

Job Requirements:

Knowledge of mathematics and statistics at an advanced undergraduate level.

Experience in applied mathematics and numerical computing (e.g., MAT321)

Experience programming in Python and Latex

Learning Outcomes:

Collaboration, Data Analysis.