Research Experiences for High School Students Project Description

Project Title: Neuroscience Gateway Software Intern

1. Overall Research Project

The Neuroscience Gateways (NSG - www.nsgportal.org) provides access to supercomputing resources for computational neuroscientists. Through a simple web-based portal, the NSG provides user-friendly environment for uploading models, specifying supercomputing job parameters, querying running job status, receiving job completion notices, and storing and retrieving output data. The NSG distributes user jobs to appropriate supercomputing resources. We are interested in students who are proficient in scripting languages to be able to develop a code that will automatically submit various neuroscience modeling tools to supercomputing resources and test the NSG software infrastructure. Required skills include python or perl programming, exposure to Linux systems.

2. Number of Students to be supported: 1-2 - for web development

3. Name of Lead person: Subha Sivagnanam, Amit Majumdar, and Kenneth Yoshimoto, San Diego Supercomputer Center, UCSD

4. Plan to Integrate Student into Group Activity

The student will be a part of the research team working on the larger scale project that includes the project described here. He or she will attend the group meetings and communicate with the team members using other methods of communication. The student will work closely with the lead person and the other personnel involved.

5. Student Prerequisite

Knowledge of web technologies such as javascript, MySQL database, HTML, & XML, Prior knowledge of using supercomputing resources is desirable but not required, Keen eye for detail

6. Number of hours per week: 10-15 hours

7. Relevant link:

San Diego Supercomputer Center:

http://www.sdsc.edu/