Research Experiences for High School Students Project Description

Project Title: Neuroscience Gateway Development Intern

1. Overall Research Project

The Neuroscience Gateways (NSG) provides access to High Performance Computing (HPC) resources to computational neuroscientists. Through a simple web-based portal, the NSG provides user-friendly environment for uploading models, specifying HPC job parameters, querying running job status, receiving job completion notices, and storing and retrieving output data. The NSG distributes user jobs to appropriate HPC resources. We require students to work on various components of the gateway such as developing web pages, content development, editing, testing portal workflow, and validating neuronal models on supercomputers.

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

3. Name of Lead person: Subha Sivagnanam, and Amit Majumdar, 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/