

ALLEN INSTITUTE *for* BRAIN SCIENCE

The Allen Institute for Brain Science, located in the Fremont area of Seattle, Washington, is comprised of a multidisciplinary staff committed to understanding how the brain works and helping to unlock the mysteries of neurological diseases and disorders affecting millions worldwide. We have the following, full-time job opportunity for a Postdoctoral Fellow in our Informatics group:

Title: Post-Doc Fellow, Informatics
Department: Informatics
Position #: 0907-03

POSITION SUMMARY:

The Allen Institute for Brain Science is embarking on an ambitious multi-year project to build a high resolution Atlas of the human brain. Elements of the project include the creation of high-resolution histological atlases of whole brains or hemispheres, high resolution sampling of anatomic structures for analysis of gene expression on arrays, and the creation of structure-specific atlases using in situ hybridization. Much like the Allen Brain Atlas (www.brain-map.org) mouse brain atlas project, the framework for the human brain atlas project will be a carefully constructed, scientifically rigorous series of human atlases. A postdoctoral research associate position is available and will work as part of the Allen Institute informatics team in creating the mapping framework, algorithms, and methodology for this effort. The position involves individual contributory research for the project as well as interaction with annotation, technology, and neuroscience teams.

ESSENTIAL DUTIES & RESPONSIBILITIES:

- Work closely with the Allen Institute Informatics group in the design and development of the computational framework for human brain atlas development.
- Assume technical responsibility for a significant component of the mapping, alignment, and registration modules that form part of the atlas.
- Interface with annotation and technology team members in the integration of informatics work with the larger project implementation.
- Actively participate in the mining research of the gene expression data to support structure based in situ hybridization work and for scientific publications
- Work with scientific collaborators in joint data mining efforts for scientific publications

QUALIFICATIONS:

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Knowledge/Skills

- Broad and diverse knowledge in computational methods with expertise in image processing, image registration and segmentation of multi-modality data sets.
- Specific working knowledge of modern techniques for preparation and analysis of high-resolution brain atlases (e.g. sample preparation, histological techniques, digital data collection, and digital annotation tools in 2D and 3D)
- Experience working as part of a multi-disciplinary team
- Strong potential for scientific contribution

Required Computer Skills

- Strong programming and design skills, knowledge of major programming environments including Windows and Linux
- Strong knowledge of computer data structures, computer algorithms and implementation of numerical method techniques

Education/Experience/Certifications

- PhD in mathematics, physics, engineering, or computational life sciences or related field
- Experience in scientific programming particularly in the implementation of complex larger parameter algorithms
- Previous experience in implementation of high-dimensional registration techniques is highly desirable

To apply for this opportunity, please email your cover letter and resume to: HR@alleninstitute.org. Be sure to include the job title and position # in the subject line.