Biggs Institute Neuroimaging Core (BINC), Glenn Biggs Institute for Alzheimer's, 7703 Floyd Curl Drive, San Antonio, Texas 78229

The Neuroimage Analytics Laboratory (NAL) and the Biggs Institute Neuroimaging Core (BINC) are recruiting a research assistant in computational neuroimaging

-the University of Texas Health San Antonio-

We seek a talented and highly motivated **research assistant/PhD student** to join our multidisciplinary research team. Alzheimer's disease and other dementias are heterogeneous conditions, which makes differentiating between them and their subtypes very challenging. Our lab focuses on leveraging advanced neuroimaging techniques and deep learning algorithms to better understand brain structure and function in health and disease, particularly on Alzheimer's disease. Successful candidates will have the opportunity to contribute to cutting-edge research projects, including but not limited to federated learning, explainable AI, and contrastive learning in neuroimaging, among others.

The Neuroimage Analytics Laboratory (NAL) and the Biggs Institute Neuroimaging Core (BINC) will be your work environment. We build advanced neuroimage analytical techniques to derive discovery. Data-driven approaches are of special interest in our lab, as machine learning and machine intelligence will guide the scientist toward the finding. On a broader goal, our tools help deliver precise diagnostics on an individual's level and ultimately could guide treatment progress.

We are part of the Biggs Institute (https://biggsinstitute.org), which is being established as a flagship, free-standing institute within the University of Texas Health San Antonio (UTHSA), with the mission of establishing an interdisciplinary, integrated program to provide comprehensive clinical care and undertake innovative and important research into the prevention and treatment of Alzheimer's Disease and other neurodegenerative conditions, including vascular contributions to dementia, Parkinson's disease, and frontotemporal dementia. It has strong institutional and community support and will benefit from existing resources within UTHSA, such as the Barshop Institute for Longevity and Aging Studies, the Center for Biomedical Neuroscience, the School of Nursing, the Cancer Center, and the Research Imaging Institute, along with the San Antonio campus of the UT Health Houston School of Public Health.

Responsibilities

- Conduct independent research under the supervision of the Principal Investigator and in collaboration with other lab members

- Develop and implement novel deep learning algorithms for neuroimaging data analysis
- Analyze and interpret neuroimaging data using relevant software packages and programming languages
- Present research findings at conferences, workshops, and other scientific events
- Prepare and submit manuscripts for publication in peer-reviewed journals
- Willingness to work in teams within NAL, BINC, and Biggs and with national and international collaborators
- Participate in lab meetings, journal clubs, and other research-related activities
- Contribute to grant applications and progress reports as required

Requirements

- A Bachelor's degree in Biomedical Engineering, Computer Science, Mathematics, Neuroscience, or a related field
- Experience with neuroimage analytics packages like spm, fsl, itksnap, etc.
- Great eagerness to solve scientific problems
- Proficiency in programming languages (e.g., MATLAB, Python, R) and familiarity with deep learning frameworks (e.g., TensorFlow, PyTorch)
- Excellent communication abilities in English, spoken and written.
- Strong analytical, problem-solving, and critical thinking skills

To apply, please send to Dr. Habes (habes@uthscsa.edu) the following materials to

- A cover letter outlining your research interests, qualifications, and career goals
- A current CV, including contact information for at least two references
- Copies of relevant academic transcripts (unofficial copies are acceptable)
- A sample of your previous research work (e.g., a published article, conference paper, or thesis)

Review of applications will begin immediately and continue until the position is filled. For more information about our lab and ongoing projects, please visit www.nallab.or.g. We thank all applicants for their interest; however, only those selected for an interview will be contacted.

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Our institution is an equal opportunity employer and encourages applications from all qualified individuals, including women, members of visible minorities, Indigenous persons, and persons with disabilities.