Postdoctoral Research Scientist

Joint Position: NYU Tandon School of Engineering & UT Southwestern Medical Center O'Donnell Brain Institute

Overview

Neuroinformatics Lab, led by Erdem Varol, PhD, at the Computer Science and Engineering department at New York University (NYU), Tandon School of Engineering, and the Program for Memory & Longevity (PML), led by Attila Losonczy, MD, PhD, at the UT Southwestern Medical Center O'Donnell Brain Institute (OBI) are seeking to hire a Computational Postdoctoral Researcher for an interdisciplinary, dual-lab position.

This role focuses on developing analysis software for integrating in vivo imaging and ex vivo spatial transcriptomics to understand the molecular bases of memory. Potential projects include characterizing learning-related plasticity through multi-omics approaches (e.g., transcriptomics, proteomics) and characterizing synaptic plasticity during navigation and learning using two-photon calcium, voltage, and neurotransmitter imaging. The successful applicant will be embedded in the larger Neuroscience community at UTSW OBI and NYU.

Collaboration opportunities are available with basic scientists and clinical colleagues from NYU Langone Health, the Center for Neural Science, and the New York Genome Center.

Lab websites are below:

www.neuroinformaticslab.com/ https://memorylongevity.org/

Location and Travel

This is a joint position between the Varol Lab at the NYU Tandon School of Engineering in Brooklyn, New York and the Losonczy Lab at the UT Southwestern Medical Center O'Donnell Brain Institute in Dallas, Texas.

The Postdoctoral Researcher will have the opportunity to work in both locations, with a preferred primary job site to be selected upon hiring. The position will cover travel and lodging expenses for travel to the other job site up to six times per year.

Responsibilities

Candidates will be responsible for designing, formulating, and implementing computational approaches for brain-computer interfaces using sensors and integrating large neural datasets, including advanced imaging and multi-omics approaches (e.g., transcriptomics, proteomics).

The successful candidate will be expected to:

- Collaborate closely with basic scientists and clinical collaborators.
- Work with the Principal Investigators to mentor a team of Ph.D. and M.S. students.
- Work efficiently in a multidisciplinary environment.

Qualifications

- Education: Applicants should have a Ph.D. in Computer Science, Electrical Engineering, Statistics, Bioinformatics, Machine Learning, Physics, Applied Mathematics, or Computational Neuroscience or a related field.
- Research Experience: Qualifications include a strong research portfolio in computational neuroscience, statistical neuroscience, machine learning, or a related field.
- Preferred Backgrounds: Backgrounds in analyzing large neural and genomics datasets, modeling complex neural systems, and state-of-the-art machine learning and computer vision are preferred. Experience in proficiency with techniques such as proteomics, transcriptomics, and genomics, and related bioinformatics and statistical analysis techniques is desirable.
- Eligibility: Eligible candidates must present eligibility to work in the United States.

Salary and Appointment

- Salary Range: In compliance with NYC's Pay Transparency Act, the annual salary range for this position is $58,500 to $90,000. Salaries will be set based on experience and skills (commensurate with experience). New York University considers factors such as the specific grant funding when extending an offer.
- Appointment: The job appointment requires a commitment of two years. The initial contract will be for one year and is renewable based on satisfactory performance.

How to Apply

Applicants should submit the below packet to both **[ev2240@nyu.edu]** and **[attila.losonczy@gmail.com]**. The title of the email should be **[NYU/UTSW Joint Computational Systems Neuroscience Postdoc Position #2501]**.

The application packet must include the following documents in PDF form:

1. A one-page description of **past research experience**.
2. A one-page description of **future research interests and goals**.
3. A current **CV**.
4. A list of **two letters of reference** (or complete contact information for two references).

Review of applications will begin as soon as possible and will continue until the position is filled.

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