Postdoctoral Appointee – Neural Computing

Sandia National Laboratories

Location: Albuquerque, NM
Full-Time, Temporary

What Your Job Will Be Like

We are seeking a Postdoctoral Appointee with a focus in neuroscience to join an interdisciplinary research program focused on developing state-of-the-art approaches and applications for brain-inspired computing. Current research topics of interest include developing neural models and novel adaptive machine learning algorithms, as well as applying machine learning to develop new neuromorphic computing approaches.

On any given day, you may be called on to:

- Conduct research and contribute to projects working on a variety of theoretical and applied topics including applications ranging from next generation computing platforms to future solutions for national security problems
- Contribute to ongoing projects and develop new lines of research with potential for application in solving complex problems
- Draw from experience in a variety of fields including machine learning, cognitive science, neuroscience, physics, engineering, mathematics, and data analytics
- Conduct high-quality research, maintain a successful publication record in peer-reviewed journals, and develop collaborations with this vibrant and growing research community

This postdoctoral position is a temporary position for up to one year, which may be renewed at Sandia's discretion up to five additional years. The PhD must have been conferred within five years prior to employment.

Individuals in postdoctoral positions may bid on regular Sandia positions as internal candidates, and in some cases may be converted to regular career positions during their term if warranted by ongoing operational needs, continuing availability of funds, and satisfactory job performance.

Qualifications We Require

- PhD in computer science, mathematics, computational neuroscience, or related field
- Experience in neural-inspired and cutting-edge machine learning algorithms
- Experience in large-scale data-driven research including the design of novel computing architectures
- Experience in at least one modern programming language (e.g. Python, Matlab, Java)
- Good communication skills and research record as evidenced by a history of publication of results in peer-reviewed journals and external presentations at appropriate scientific conferences
- Ability to obtain and maintain a DoE Q clearance

Qualifications We Desire

- Experience in performing computer science research in machine learning to develop adaptive learning algorithms for national security applications
- Demonstrated abilities in mathematical and computational modeling of neural or cognitive function
- Understanding of related domains (e.g. complex adaptive systems, scientific/numerical computing, physics, data processing, control theory, robotics)
- Experience with machine learning and neural computing frameworks
- Familiarity with advanced computing platforms (e.g. high performance computing, GPUs, FPGAs)
- Evidence of strong academic achievement

About Our Team

The Data-driven and Neural Computing Department conducts science, technology, and research and development in human-machine interface technologies, algorithms for data-heavy applications, and brain inspired computing. Examples include computational modeling of neural and cognitive processes, cognitive software agents, conventional compute platforms, advanced architectures based on integrated commodity components, data-centric computer platforms, and neural architectures and algorithms. Some of our core technologies emulate and augment human cognition using algorithms ranging from machine learning to detailed physiologically-based models of perception and cognition.

Equal opportunity employer/Disability/Vet/GLBT