Technical Research Staff Opportunity in Brain Computer Interface (BCI) Research

Summary:

We are looking for motivated individuals to join the Pediatric Brain Computer Interface (BCI) program at the Alberta Children's Hospital and the University of Calgary. We are currently recruiting a research staff member to expand our diverse team focused on adapting, developing, and implementing BCIs for children with physical disabilities. The BCI program is embedded within a multi-disciplinary team of neuroscientists, engineers, computer scientists, therapists, and clinicians at the Alberta Children's Hospital.

The Program:

The aim of the BCI Program is to provide opportunities for children with severe neurological disability to access leading-edge, non-invasive brain-computer interface technology to achieve greater independence and quality of life. We are building a child- and family-centered clinical program that connects emerging BCI technologies with affected patients, placing patients as primary stakeholders that guide and inform the technological process. As we grow our clinical program, we also strive to drive forward our understanding of how BCI technology can best be adapted for complex pediatric populations.

The Candidate:

We are looking for passionate, motivated, aspiring individuals to help drive pediatric BCI application, software, and hardware development. Interested individuals should have a background in any of the following areas: Electrical, Software or Biomedical Engineering, Computer Science, Neuroscience, Applied Mathematics, or other related areas. We particularly encourage applications from individuals with portfolios demonstrating experience in machine learning, software development, app development, signal processing, robotics and/or electronic circuit design who are seeking to apply their skills to solve important clinical problems. Individuals should be interested in working with children, including those with complex physical disabilities, in a clinical environment.

The Skills:

We invite you to apply if you have experience in the following skills:

- Programming in languages such as Python, C++/C#, JavaScript, MATLAB.
- App development in Swift, React, Kotlin.
- Game development in Unity, Unreal, Godot.
- Implementing and applying machine learning techniques.

- Recording and analyzing EEG, EMG, and other bio-signals.
- Digital signal processing.
- Designing electronics/simple electric circuits.
- Rapid prototyping of new technologies.
- Assisting with the operations of a clinical program or research study.

The Responsibilities:

As a research staff with the BCI team, your responsibilities would include:

- Providing technical support for ongoing research projects.
- Developing, adapting, and distributing cutting-edge BCI tools and applications.
- Supporting network infrastructure and database maintenance.
- Assisting with day-to-day operations of the BCI program.
- Collaborating with other members of the BCI team and broader networks, including individuals with different and diverse backgrounds.
- Maintaining excellent project management and meeting internal deadlines.
- Thinking openly and creatively, and effectively communicating ideas and concepts.

The Benefits:

With the BCI Team, you will be part of the broader Calgary Pediatric Stroke Program family, where we offer additional opportunities, including:

- Developing close relationships and learn from a multi-disciplinary team of neuroscientists, neuroimagers, clinicians, neurologists, therapists, rehab scientists, engineers and more.
- Contributing to publications, attending conferences, and supporting other research activities.
- A competitive salary and benefits from the University of Calgary, with ongoing career development resources and support.
- Directly integrating with the Alberta Children's Hospital (where our facilities are located), allowing you to build connections and relationships directly with the populations we serve.
- Being a part of one of the only pediatric-focused BCI labs in the world and advance the front edge of a promising and impactful field.
- Affiliating with a pan-Canadian network focused on pediatric BCI technology, with access to knowledge from a wide range of researchers, clinicians, and trainees across North America with years of expertise in the field of BCI research and development.

Contact Inquires:

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