UI-UX Designer / Software Engineer

Hiring Organization: School of Engineering, Brown University, Providence, RI

The BrainGate Neural Interface System research team at Brown University is seeking an enthusiastic, highly skilled and innovative UI Designer / Software Engineer with Design and UX skills to contribute to a fast-paced engineering project that will define the future of brain-implantable neural interface technology to improve communication and independence for people with severe motor disabilities. Aesthetic GUI design confidence, GUI programming skill using modern web (and other) technologies, and ability to work with UX stakeholders for UI specification and prototyping are required. Training and experience in the graphical design / aesthetic domain should be complemented by professional coding experience implementing elegant UI beyond wireframes. As part of a collaboration with the BrainGate research team at MGH, this is a regular full-time, benefited position as a Brown University employee based at Brown University and funded for 2 years. Work will be performed on site embedded with our team in the School of Engineering at Brown University.

Due to the pandemic, this position will be interviewed, onboarded, trained and begin working entirely remotely.

Relevant activities include, but are not limited to the following:

- Execute an iterative, user-centered UI/UX process to design and create polished, intuitive and highly functional User Interfaces for a complex brain-computer interface (BCI) system
- Create sketches, interaction flows, wireframes, interactive prototypes and testing protocols, and effectively communicate design processes and solutions to clients and team members
- Implement, integrate and test GUIs using state-of-the-art software technologies and processes
- Program final deployable GUIs for iOS, Web, Windows, and Android targets
- Work closely with team engineers, clinicians and neuroscientists to integrate UI/UX solutions that provide GUI-based visibility and control of the entire multi-device real-time system
- Participate in development of the system information architecture and data structures needed to manage GUI parameters and to collect, store and move status & control information.
- Define APIs and contribute to stack design in coordination with other engineers
- Program real-time, low-latency data-driven web applications including streaming graphic displays using highly efficient browser-based real-time graphing methodologies
- Create and execute robust verification tests and ensure reliability of programming products
- Perform user interviews and field validation testing to develop and ensure system usability
- Write exceptional, highly consistent, well-documented, supportable modular code
- Work individually and as a critical member of a high-performance cross-functional team to assess and solve implementation challenges on the cutting edge of technology

Qualifications

Education and Experience

Bachelor's degree required. Master's degree preferred, with experience in User Interface / Graphic Design, Web Design, or similar area of visual design and at least 3 years of employment in Design with Software Programming.

Required Competencies:
- Fluent ability to design and implement polished GUIs across a variety of platforms including iOS, web and Windows
- Proficiency with industry-standard & new creative tools/technologies for UI/UX & web design
- Competency with GUI prototype and mock-up tools
- Expert knowledge and proficiency with several web programming technologies including Node.js, React, Angular, JavaScript, JS libraries, HTML5, CSS, JSON and similar.
- Real-time browser-based graphing techniques for low-latency, high-rate drawing & updating
- Expert proficiency with responsive design for web applications
- Competency defining new APIs for UI integration / interactions
- Proficiency with source control (Git) and collaborative development tools
- Ability to create test suites and performing code verification and validation
- Passionate understanding of UI/UX best practices and emerging trends
- Outstanding communication and presentation skills

Preferred Competencies:
- Design for accessibility
- Experience with rapid, iterative UI/UX development in small agile teams
- Developing UI for health care or medical device applications
- Demonstrated interest in neuroscience, brain-computer interfaces and/or assistive technologies
- Experience with high-performance UI libraries
- Proficiency in Python, C/C++, scripting, or other supporting coding methods
- Coding fluency with Android and MacOS targets
- Experience in both industry and research development environments

Working with the BrainGate Team:

We are an internationally recognized, multidisciplinary team of engineers, computer scientists, neuroscientists and clinicians leading innovation in the field of assistive brain-computer interfaces. Our research has shown that a brain-computer interface implanted in motor cortex can enable individuals with paralysis or locked-in syndrome to reliably control a computer cursor using their imagined hand movements. We are expanding our team to help create the world's first fully mobile, wireless BCI that will be useable at home without technical oversight. As the team's UI/UX Designer and Software Engineer, you will have a unique opportunity to apply your experience to this exciting and important project to create the future of this medical technology. Visit us at BrainGate.org.

Benefits:

You will be a full-time employee of Brown University with standard benefits including medical, dental and vision plans, all in an exceptional academic work environment. Details are available at:
http://www.brown.edu/about/administration/human-resources/

For more information:

Contact John Simeral at jsimeral@brown.edu

To Apply:

Please use this link to directly view and apply for the position on Brown's Career Site.