

Signal Processing Senior Research Officer/Research Officer

You will be involved in software development of an advanced stroke rehabilitation systems and assist clinical trials of the system in hospitals together with doctors and therapists.

The main responsibility is to implement advanced brain-computer interface algorithms into a computer based rehabilitation system (programming languages include C, C++, and C#).

You will work with a team in collecting, analyzing and achieving clinical data. You will work with therapists in the clinical setting for field trials.

Requirements:

- A Master's or Honoured degree in Electrical & Computer Engineering, Computer Science or related disciplines.
- 1 - 4 years of working experience in software industry is preferred
- Proficiency in C/C++, experience in Matlab programming is a plus
- Prior research experience BCI is advantageous
- Strong self-drive in adapting and learning new software tools and methodologies
- A team player and with good interpersonal communication
- Resourceful and able to work independently, is initiative and possess good problem solving skills.
- Fresh graduates are welcomed to apply

Signal Processing Senior Research Officer/Research Officer

You will work in a team to develop software for real-time monitoring and supporting in neural critical care unit.

The main responsibility is to implement advanced data acquisition, processing and communication algorithms in a computer based system (programming languages include C, C++, and C#). The main job duty includes software development, GUI design, data communications, system development and integration.

You will work with a team to collect, analyze and achieve clinical data. You will work with medical doctors in performing clinical trial.

Requirements:

- A Master's or honoured degree in Electrical & Computer Engineering, Computer Science, Electrical & Electronics Engineering or related disciplines.
- Strong experience in software development and software QA
- Knowledgeably in signal processing, data mining, pattern recognition is advantageous
- 2 - 5 years of working experience in software development is preferred
- Proficiency in C/C++/C#
- Good knowledge in software engineering is a strong merit
- Experience in GUI design is a plus

- A team player and possess good interpersonal communication
- Resourceful and ability to work independently, is initiative and have good problem solving skills.

Signal Processing Senior Research Fellow / Research Fellow

You will work with a team of researchers, engineers and medical doctors to develop statistical signal processing method for the analysis and fusion of real-time multi-source neural and bio signals.

You will be required to extract clinically meaningful information from continuous data (such as EEG, ECG, ICP, PR, SaO2, PRx, etc) and develop effective pattern recognition algorithms so as to provide decision support to medical doctors.

Advanced signal processing algorithms will be developed to predict medical outcomes based on large data.

You will be involved in clinical trial of the developed methods in an ICU.

Requirements:

- A PhD in Electrical & Electronics Engineering, Computer Science or related disciplines.
- Expertise in statistical signal processing of time series, especially neural and bio-signals.
- Sound understanding of pattern recognition, machine learning and data fusion
- Experience in brain-computer interface is a strong merit
- 1 - 3 years of working experience is preferred
- Proficiency in Matlab, C/C++ programming
- Strong analytic skills to process and interpret data
- Team player with good communication skills and adaptable to work in a multi-cultural team environment
- Resourceful and ability to work independently, is initiative and must have good problem solving skills.

Signal Processing Senior Research Fellow / Research Fellow

You will work in a team to perform research and development for brain computer interfaces for stroke rehabilitation. Responsible for analysis of neural signals acquired with EEG, fMRI and fNIRS, in order to understand the physiological process underline the stroke recovery.

You are required to develop objective indications from neuron image (multi-channel time-series neural signal generated from EEG/fMRI/fNIRS) to measure the progress of brain status, so as to track neuron-connectivity towards personalized stroke rehabilitation. The research work also involved neural information extraction and pattern classification.

Requirements:

- A PhD in Electrical & Computer Engineering, Computer Science or related disciplines
- Expertise and background in neural signal processing, brain-computer interface, or neuro imaging
- Good command of signal processing, pattern recognition and machine learning.
- Strong research capabilities evidenced by research track record
- 1-3 years of working experience are preferred.
- Proficient in Matlab and prevailing neuron image analysis tools.
- Good at C/C++
- Team player with good communications skills and adaptable to work in a multicultural team environment
- Resourceful and ability to work independently with good initiative and problem solving skills is a must
- Fresh graduates are welcomed to apply

Signal Processing Senior Research Fellow / Research Fellow

You will work in a team to develop advanced algorithms for brain signal processing based on pattern recognition and machine learning.

The algorithms will be applied to brain computer interfaces, epilepsy seizure detection, epilepsy classification and prediction. The research will focus on research and development of multi-channel time-series signal processing, feature extraction, classification, and adaptation.

You will be responsible for proposing, developing and validating the algorithms and transferring the techniques to a real-time working system, which will be situated at hospital for clinical trials. You will also be required to investigate the fusion of brain signal with video information for accurate source localization and seizure detection.

Requirements:

- A PhD in Electrical & Computer Engineering, Computer Science or related disciplines
- Background in signal processing, pattern recognition or machine learning.
- Experience in neural signal processing, brain-computer interface, cognitive science is a strong merit.
- Knowledge in epilepsy and experience in medical domain is a plus.
- Preferred 1-3 years of working experience in neuron signal processing or related area.
- Neural signal processing, pattern recognition and machine learning.
- Proficient in Matlab
- Good at C/C++
- Team player with good communications skills and adaptable to work in a multicultural team environment
- Resourceful and ability to work independently with good initiative and problem solving skills is a must
- Fresh graduates are welcomed to apply