Three positions are available immediately at the **Postdoctoral** level or for **Graduate** students currently enrolled in a Canadian university for a **Computational Neuroscientist**, **Machine Learning Specialist**, and **Audio Enhancement/Signal Processing Specialist**.

The starting date is **July 1, 2020** for a duration of 12 months, with possibility of renewal. Remote working solutions are possible. Physical presence at AAVAA offices will be possible as the COVID19 situation evolves.

These job and training opportunities are to work on an industrial-academic collaboration on new hearing-aid technology. The successful candidates will be co-supervised by Dr. Naeem Komeilipoor (AAVAA) and Dr. Sylvain Baillet (McGill/The Neuro). The project is supported in part by MITACS.

We are looking for candidates who are meticulous, problem solvers, with a team player spirit intrigued by working at the intersection between academia and the industry. Please see below to ensure you have experience in the requested areas.

Computational Neuroscientist

- Electrophysiology time series analysis (M/EEG)
- Advanced digital signal processing
- Machine learning (incl. experience with DNN, CNN, RNN, GAN, LSTM)
- Brain-computer interfacing
- Auditory neuroscience and psychology of hearing
- Proficient in Python and Matlab.

Machine Learning Specialist

- Machine learning (incl. experience with DNN, CNN, RNN, GAN, LSTM and SVM, KNN, Naive Bayes.)
- Deep learning frameworks (e.g., PyTorch, TensorFlow, Keras, Scikit)
- Proficient in Python, Matlab, C, C++, Java.
- Experience with time series data analysis
- Feature engineering and dimensionality reduction
- Statistical methods such as Bayesian statistics and statistical inference
- Knowledge of using cloud platforms
- Github.

Audio Enhancement and Signal Processing Specialist

- Speech enhancement, such as noise reduction, acoustic echo cancellation, gain control, microphone arrays, beamforming, or source separation
- Industrial hardware design of hearing aids or Bluetooth audio devices
- Advanced digital signal processing, esp. biosignals, automatic speech recognition
- Proficient in Python and Matlab
- Some knowledge of machine learning and frameworks such as PyTorch, TensorFlow, Keras, Scikit.

AAVAA is a Montreal-based start-up designing a *smart* listening device. The successful applicants will be involved in the conception of this device that combines sound processing with real-time brain inputs and other biosignals. The project's goal is to advance hearing-aid solutions by improving listeners' control over their auditory environment with greater source selection and active suppression of distracting noise.

Interested candidates need send a cover letter (max. 2 pages), a CV or resume, and contact information for 2 references to info@aavaainc.com.