POSITION 2 : SOFTWARE RESEARCH ENGINEER IN NEUROMORPHIC SPINTRONICS

Company: Spin-Ion Technologies

Location: Palaiseau - FRANCE

Type: Permanent (CDI), Full-time

Spin-Ion Technologies is a cutting-edge start-up company at the forefront of spintronic technologies, which has developed an innovative manufacturing solution to create the next generation of intelligent and energy-efficient neuromorphic chips.

To bring powerful AI solution to the edge, Spin-Ion Technologies is looking for a talented software scientist to participate to the development of an Artificial Neural Network demonstrator (https://www.spin-ion.com/eic-project/) composed of magnetic devices based synapses. This demonstrator involves both hardware & software developments, which will bridge computational neuroscience and deep learning while generating strong impact for future embedded and neuromorphic systems. The project involves working with leading international teams in artificial intelligence and major industrial partners.

Position Overview

Spin Ion Technologies is seeking a high-level junior or senior scientist to join our dynamic team. The ideal candidate will have a very good knowledge in algorithm development for neuromorphic computing and a desirable experience in experimental and theoretical aspects of spintronics. The candidate should be willing to open new directions in applications of neuromorphic computing as well as to contribute to business activities within the start-up.

Candidates should hold a PhDs with a desirable post-doctoral experience (2+ years). The ability to conduct successful R&D activity in a deep tech start-up environment is essential.

Responsabilities

- Algorithm Development: design, implement, and optimize algorithms for neuromorphic computing based on experimental results on magnetic devices
- Modeling and Simulation: develop computational models and simulations to analyze and predict the behavior of neuromorphic spintronic devices
- Collaborate with hardware engineers, physicists, and neuroscientists to integrate software solutions.
- Performance Optimization: optimize software performance for real-world applications, considering both computational efficiency and energy consumption, in particular for edge IA
- Research Contributions: stay abreast of the latest advancements in neuromorphic computing, spintronics, and related fields, and contribute to research publications.
- Documentation: maintain clear and comprehensive documentation for software code, algorithms, and simulation methodologies.

- File patents and generate know-how to contribute to the assets of Spin-Ion Technologies.
- Publish research findings and present at conferences to contribute to the external scientific community.
- Contribute to the development of business activities within the start-up.
- Manage research collaborations with academic and industrial partners.

Qualifications

While no candidate will embody every quality, the successful candidate will have experience with some of the following aspects :

- Ph.D. in Physics, Electrical Engineering, Computer Science and Materials Science.
- Expertise in neural network programming (Pytorch,..).
- Expertise in algorithm development for emerging devices.
- Expertise in Microelectronics, Spintronics, MRAM, neuromorphic computing.
- Manage research collaborations with academic and industrial partners.
- Experience with data processing and analysis (Python,..).
- Good English communication skills.
- Enthusiastic to the work and strong team spirit.
- Good at managing projects and multiple tasks.
- Ability to be proactive and flexible.

Benefits

- Competitive salary.
- Incentive plan for patent submission.
- Opportunities for professional development and career advancement.
- Collaborative and innovative work environment.
- Flexible work schedule and remote work options.
- Professional development opportunities.

If you are passionate about pushing the boundaries of neuromorphic spintronics and contributing to groundbreaking research, we invite you to apply for this exciting opportunity. To apply, please send your resume and cover letter to dafine.ravelosona@spin-ion.com

Spin Ion Technologies is an equal opportunity employer and encourages candidates from all backgrounds to apply.

Application Deadline : March 31st, 2024

Salary : >50 k€ brut depending on experience