Junior Software Developer - Open-Source Neuroimaging Infrastructure (ENIGMA)

Location: CHU Sainte-Justine, Montreal, Canada - on-site position (in-person)
Contract: 1 year, renewable
Salary: Competitive, commensurate with experience, with excellent benefits
Team: ENIGMA fMRI Methods Core https://enigma.ini.usc.edu/ongoing/enigma-rsfmri/
Supervision: Pr. Clara Moreau, Pr. Lune Bellec
Technical Lead: Lea Waller

About the Role

The ENIGMA consortium aims to scale HALFpipe https://fmri.science/halfpipe/, an open-source platform enabling large-scale, standardized and federated neuroimaging processing across hundreds of laboratories worldwide.
We are recruiting a junior software developer seeking a professional role in open scientific infrastructure. This is a growth-oriented position within a supportive and collaborative technical environment.

Responsibilities

- Triage issues and help resolve bugs
- Strengthen testing and CI pipelines
- Improve documentation and developer experience
- Refactor components for clarity and modularity
- Implement high-priority features from the project roadmap
- Support onboarding of contributors and community events (hackathons, code sprints)

A meaningful portion of time will be dedicated to contributing to upstream projects that underpin the ecosystem, including:

- Nilearn (Python neuroimaging library)
- fMRIPrep (fMRI preprocessing pipeline)

Ideal Profile

- Strong Python programming skills
- Neuroimaging experience
- Comfortable with Git and collaborative workflows
- Interest in testing, CI, and maintainable software design
- Motivated by open science and community-driven projects

Experience in scientific computing or prior open-source contributions (e.g., Brainhack participation) is a strong plus but not required.

What We Offer

- Mentorship from experienced scientific software leaders
- Opportunity to contribute to infrastructure used by hundreds of labs
- Visible, citable open-source contributions
- Multidisciplinary collaborations across neuroscience and software engineering

Commitment to Inclusion

HALFpipe is a community-driven initiative with transparent governance and a strong commitment to inclusivity. We encourage applications from individuals from traditionally under-represented communities in software development, including women, non-binary people, and Indigenous applicants.

How to Apply

Interested candidates should submit:

- A CV
- A brief cover letter describing their research background, relevant expertise, and interest in the position
- Contact information for 2-3 references

Please send applications to clara.moreau@umontreal.ca