Research scientist

About Tensor Medical

Tensor Medical is a spin-off company of the University of Girona and the Vall d' Hebron Institute of Research (VHIR) in Barcelona with the main goal of helping clinical experts to improve care of patients suffering neurodegenerative diseases such as Alzheimer and Multiple Sclerosis (MS). At Tensor, we develop software that provides the most robust and precise medical imaging biomarkers to improve the clinical management of patients, to predict future disease stages and to optimize the treatment decisions for each patient.

We are a small remote-first startup that dreams big but always with a firm foot on the ground. Our team is composed of 7 members including medical key opinion leaders and internationally awarded medical imaging researchers. We are completely convinced that medical imaging biomarkers will revolutionize neuroradiology, so we are working on our mission to become the standard protocol in the clinical management of neurodegenerative diseases.

What are we trying to solve

Nowadays, we are focusing first on improving the clinical management of MS patients. MS patients are treated with different disease modifying treatments where their adherence is mostly based on the lack of brain Magnetic Resonance Imaging (MRI) activity (presence of new lesions) during periodic follow-ups. However, neuroradiologists quantify the presence of lesions by a tedious, time-consuming, and error-driven visually process that reduces their sensitivity below 50% in some cases, which can lead to sub-optimal treatments and increasing disability of the patient in the mid-term.

Although there are several automated solutions in the market that can deal with MS follow-up of MRI activity, still the latest international clinical guides published last year at the Lancet Neurology do not recommend the use of software solutions for MS follow-up mostly because of 1) the lack of evidence that these tools work in clinical settings and 2) the need of strict standardization of image acquisition (i.e., identical MRI system, pulse sequences, and acquisition parameters).

We are working to solve these issues, developing our deep learning-based software platform copilot.ms that helps neuroradiologists to improve the assessment of MRI activity in MS patients, offering unprecedented sensitivity and specificity detecting new appearing lesions.

Role description

We are looking for a new passionate member of our team who shares our vision, a research scientist who will help us to improve the **copilot.ms** software in ways we cannot imagine.

Your main responsibilities and tasks will be:

- Quantitative analysis of imaging data using state-of-the-art software tools.
- Research and development of techniques for unmet clinical needs such as MRI scanner invariance, denoising, and data harmonization.
- Research and development machine learning algorithms to improve the performance of the model on new hospitals.
- Implement developed techniques into production models.
- Apply expertise and experimental skills to execute clinical imaging experiments/studies in a time sensitive manner, including experimental planning and preparation, protocol design/validation, operating various imaging systems, imaging data acquisition and experimental documentation.
- Prepare publications and presentations as author or co-author.
- Collaborate with the Chief Scientific Officer and the Chief Technical Officer in planning, conducting, and evaluating data.
- Assist in the preparation of project proposals.
- Teamwork and collaboration with Tensormedical members and hospital partners, in a multidisciplinary environment.

We would love to meet you if you:

- Care about our mission.
- Like challenges and to question the status quo.
- Have a PhD in Computer Science, Engineering, Mathematics, Physics of another related area.
- Are a medical imaging hacker with strong knowledge of neuroimaging and deep learning tools such as Python, OpenCV, Pytorch, etc...
- Have a strong record of scientific publications in the related field.
- Are motivated and proactive with the ability to work independently, develop and implement innovative ideas in an asynchronous remote team.
- Have excellent written and verbal communication skills in English (Catalan and Spanish are a plus).

What can we offer you?

- Full-time contract in an exciting international MedTech start-up environment.
- Join a passionate team of high-performing members willing to improve patients' lives, where everybody is trusted and has a voice.
- Learn and grow together with the company in a challenging and fast-paced environment.
- Opportunities to advance your career in a growing organization with an enriching culture.
- Flexible working hours: work in a strong asynchronous remote team that is focused on tangible deliverables and results.
- Competitive compensation according to your experience.

If you are already thrilled to know more and meet the position's criteria, we want to know you! Send us an e-mail to [info@tensormedical.ai.](mailto:info@tensormedical.ai) explaining to us why you want to join and attaching your CV.