



AVATAR MEDICAL

## Junior Machine Learning Scientist - Medical Imaging

Paris, France + Partially Remote - 2022

**AVATAR MEDICAL SAS** is an exciting new MedTech start-up that radically enhances the manner in which surgeons prepare their surgeries.

Based on technology developed at the **Institut Pasteur** and **Institut Curie** (<https://diva.pasteur.fr/>), **AVATAR MEDICAL** uses advanced image processing algorithms coupled with virtual reality (VR) to transform medical images (e.g. CT-scans, MRI) into lifelike patient avatars. This grants surgeons an excellent understanding of their patients' pathology via an immersive and interactive VR experience. Our technology is meant to facilitate communication between radiologists and surgeons, allowing a more efficient and rapid surgical planning. Our technology has been recognized with numerous scientific and medical journal publications and **AVATAR MEDICAL** is a laureate of many prestigious competitions for innovative startup companies (BPI i-Lab, BPI i-Nov, Medfit, Laval Virtual) .

**AVATAR MEDICAL**'s leadership team consists of passionate French and American co-founders with proven experience in tech entrepreneurship, sales, marketing and scientific research. Our technology, being commercialized between France and the USA, is developed by a talented team of physicists and software engineers who work closely with the **Decision & Bayesian Computation Laboratory** at **Institut Pasteur** (member of the **Paris Artificial Intelligence Research Institute, PRAIRIE**) and a network of hospital partners in France and the USA.

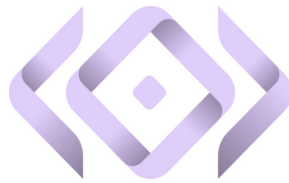
We are recruiting a **Junior Machine Learning Scientist - Medical Imaging** to join our research and development team. The successful candidate will apply machine learning based image analysis approaches to enhance surgery planning and the quantification of various organ anomalies. They will play an integral role in the development of a new clinical product where these algorithms will be embedded. She/he will join a research and development team consisting of 5 software and research engineers within a fast-growing startup.

This position is a unique opportunity to contribute to a highly multidisciplinary project combining **medicine, machine learning based image analysis, surgical procedure planning and advanced rendering** approaches in an inspired effort to greatly improve the surgeon's work flow at the hospital. The successful candidate will gain valuable experience in the MedTech domain and play a vital role in the commercialization process of a SaMD (Software as a Medical Device).

**The position can evolve into a leadership role within the company.** We will happily welcome ambitious young engineers, researchers or PhDs who want to grow with us. You could soon become the lead of AI at AVATAR MEDICAL, have your own team and deploy your vision, an opportunity that you will not get in a larger company.

### Roles

- Designing and implementing models and algorithms and conducting their validation
- Work with developers to transfer software prototypes into commercial solutions
- Interacting with medical professionals to create meaningful innovations and Intellectual Property
- Maintaining deep knowledge of technical developments in your field through study of the literature and contacts with the research community
- Develop, test and integrate machine learning algorithms



## AVATAR MEDICAL

Contribute to the deployment of the pipelines with the development team  
Own requirements on data structuration and IT environment and help in designing solutions therefore  
Supervise, coach and mentor machine learning and developer interns  
Work with our Quality Team to ensure medical device compliance

### Required Qualifications

PhD in Mathematics, Data Science, Image Processing or physics; or Master's degree and relevant experience  
In-depth knowledge of machine and deep Learning in image-based applications, experience with medical images (DICOM) will be a real +  
Development experience in PyTorch, TensorFlow, Keras or Jax  
A pragmatic approach in doing fast and effective evaluations by creating prototypes  
Strong interpersonal skills who can work in a highly interdisciplinary/international team environment  
Strong analytical and critical thinking skills  
Effectiveness at communicating design/engineering trade-offs  
Fluent in English

### Nice-to-Have Qualifications

Agile development experience (e.g. source control, release cycles, CI/CD)  
Experience in deployment of AI solutions after training  
Experience with creating and managing medical images databases

### Contract Type

Contrat à Durée Indéterminée (full-time permanent position)

### Location

The position will be located at PariSanté Campus (10 Rue d'Oradour-sur-Glane, Paris, France).  
However, remote working is possible and can be discussed.

### Recruitment Process

The successful recruitment process will take place as follows:

1. Selection for a first informal interview with the CSO
2. Selection for a second technical interview with the CTO
3. Interview with the CEO/HR
4. Job offer

### Contact

Please contact [jobs@avatarmedical.ai](mailto:jobs@avatarmedical.ai) with your

CV

References (mentors, PhD advisors...)

Link to your personal code repository (e.g. GitLab, GitHub)

List of papers and proceedings