

OBJECT: OPEN POSITION LG-OP001-2024

POSITION SUMMARY

A new open position for an R&D specialist within the cardiovascular team at LivGemini. The selected candidate will work using DICOM medical images to develop virtual patient populations through statistical shape modeling techniques and integrate model order reduction methods to create surrogate models. Key skills, described in more detail below, include expertise in AI techniques for medical image analysis and knowledge of computational methods for structural simulation.

Applications are open from May 20th to July 30th, 2024.

ABOUT LIVGEMINI

LivGemini is an innovative start-up based in Italy focused on developing Digital Twins in the cardiovascular sector for developing in-silico trials for supporting the clinical staff during the medical device selection. Thanks to the entrepreneurial initiative, LivGemini has been recognized with the Italian Innovation Award in the MedTech category. Our mission is to revolutionize how clinicians plan and perform cardiovascular surgical procedures by integrating numerical simulation and artificial intelligence techniques. This integration provides surgeons with robust and precise tools to optimize surgical processes and patient outcomes. We envision a future where each patient receives a personalized treatment based on his anatomical and physiological features, significantly reducing complication risks and enhancing precision for improved clinical outcomes. We are currently working for offering highly personalized, robust and especially intuitive software solutions.

ABOUT THE JOB

The role involves:

- Supporting the development of machine and deep learning algorithms for medical image analysis, including semantic segmentation, landmark localization and object detection.
- Leading the development of workflows for the creation of computational models used to generate virtual populations.
- Performing data crunching for delivering accurate surrogate models.
- Contributing to the development of core software libraries and technical documentation.
- Designing quality management processes for developed software, aligning with standards like ISO 13485, ISO 62304, and ISO 27001.
- Addressing technical requirements and challenges, developing workflows to orchestrate in silico trials of medical devices.
- Communicating technical concepts to both expert and non-expert internal and external stakeholders.
- Supporting the team in creating technical demos for the meetings.

Remote work will be allowed up to two days a week. The remaining three days must be on-site. The workplace will be in Rome. Work hours are flexible, provided that attendance at appointments and meetings is maintained. The type of contract and the salary will be commensurate with the candidate's experience in compliance with the relevant Italian regulations.

The start of the employment position is scheduled for September 2024. Potential changes will be announced via updates on the website at <https://www.livgemini.com/Careers>.

MINIMUM QUALIFICATION AND EXPERTISE

- Master's degree in Engineering, Informatics or Physics with demonstrated experience (thesis manuscript – publications – proof of concept) in at least two of the following points: 1) development of machine/deep learning algorithms for medical image analysis, 2) structural or CFD simulation for biomedical applications, 3) development of algorithms for creating and testing virtual populations.
- Proficiency in Python and use of established libraries for machine/deep learning (e.g., PyTorch, TensorFlow) and scientific software packages (e.g., SciPy, NumPy, ITK, VTK).
- Experience following best practices in software development, including code version control with Git.
- Ability to communicate research effectively to both expert and non-expert audiences.
- English must be fluent.

5 COMPELLING REASONS TO JOIN LIVGEMINI

1. **Impact:** contribute to ground-breaking advances of in-silico trials that will transform the medical device industry and deliver innovations for the patients' healthcare and well-being.
2. **Entrepreneurial Environment:** be a significant part of a cutting-edge start-up that encourages creativity and agility.
3. **Research-Driven Innovation:** collaborate with a world-class scientific team to influence the development of products and services based on state-of-the-art research.
4. **Upskilling and Scaling:** gain valuable training and opportunities for rapid scaling within the start-up.
5. **Flexibility:** enjoy a flexible goal-oriented work environment, complemented by hybrid working opportunities.

APPLICATION

If you are interested in joining our team, please get in touch!

Send your CV (maximum 4 pages) and a single-page cover letter to info@livgemini.com with the title: "Application LG-OP001-2024 *LastName FirstName*". In your cover letter, briefly describe how your experience, knowledge and skills meet the job requirements. After evaluating the CVs, upon closing the position, selected candidates will be re-contacted to arrange an online assessment meeting on a pre-determined date.