UNVEIL

R&D engineer

Who we are

UNVEIL (https://unveil-instruments.com/) is a deep tech start-up, spin-off from the Charles Fabry laboratory (Institut d'Optique Graduate School, Université Paris-Saclay), developing a new optical technology for characterizing nanoparticles for companies developing new biodrugs.

These pharmaceutical companies develop innovative therapies, such as gene therapies (i.e., therapies that aim to genetically modify the patient's cells to achieve a therapeutic effect) or new classes of vaccines (e.g., RNA messenger vaccines). These drugs are unique in that they are composed of nanoparticles (such as modified viruses, lipid nanoparticles, extracellular vesicles, etc.).

UNVEIL instrument facilitates and accelerates the development of these therapies in the early stages of R&D and production by allowing fast (5 min / measurement), cheap (using 50,000 times less sample than legacy technologies) and easy nanoparticle characterization (concentration, size, and mass sample distribution).

The technology is composed of both hardware (a high performance interferometric microscope) and software (image and signal processing).

UNVEIL has developed a Minimum Viable Product based on this technology and plans to transition into an industrialized product during 2026.

The team is currently composed of 6 team members. We want to be a place where everyone in the team thrives and shares our values: Teamspirit, Persistence, Adaptability, Rationality and Curiosity.

What the job would be

Overall Mission

Your main mission, should you choose to accept it, will be to improve the performance of our technology on complex samples and to help produce examples of such performance through collaborations and publications.

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Goals and responsibilities

- Improve the instrument's performance on complex nanoparticle samples by developing new image processing algorithms, notably denoising and detection codes for noisy and complex images.
- Collaborate with our academic biologist partners and characterise their samples using our technology with the aim of publishing scientific articles in high-impact journals.
- Collaborate with biotech partners to conduct proof-of-concept studies on their samples and publish white papers describing this work.

Remuneration and benefits

- Full time Job (*CDI*)
- Salary depending on profile and experience
- Equity (*BSPCE*)
- Meal vouchers
- Mutuelle Alan

Work location and remote working

- Job location: Laboratoire Charles Fabry, Palaiseau (France)
- 1 day/week remote working + flexibility for specific events

Who we are looking for

Required

- Engineering or Master degree in physics/math or Phd
- Experience in scientific calculations
- An interest and some experience in biology

Valued and optional skills

- Experience in image processing (denoising, detection, etc.)
- Skills in mathematics/statistical analysis
- Knowledge of physics, specifically wave optics/Fourier optics
- Knowledge of biology, particularly in the field of cell/gene therapies
- Skills in Python
- Skills in C++ or CUDA C++
- Fluent in English

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What the recruitment process will be

- Send application to : recruitment@unveil-instruments.com with:
    - The reference Senior software engineer - First name / Second name in the e-mail title
    - Resume attached
    - Short intro in the e-mail (5-10 lines max) explaining why you think you will be a good fit and why you are interested in this position
    - No need for a motivation letter
- Positive/negative answer in max 72 hours
- First 30 min interview in visio
- Meeting with funders (on site 1h) + Team lunch
- Case Study (2h)
- Reference check
- Job offer