PhD Thesis at Inria
on
“Generative AI for the anonymization of medical images”

Context: The rapid advancement of AI solutions in healthcare brings a critical challenge: how to reconcile the development of efficient AI technologies with the need to enforce data privacy and safety. Simply removing sensitive information from medical images is often insufficient, as subtle biometric features within these images can still pose a re-identification risk. One strategy to ensure privacy in machine learning is to generate anonymized images from sensitive datasets. These anonymized images can then be shared more freely in a data lake for training AI algorithms without compromising privacy**.**
This PhD is part of the PLICIA project, which focuses on creating a software platform for managing and annotating medical data, particularly photographs and other medical images. The platform will also support the development of solutions for monitoring disease progression and treatment

Phd Topics: The objective of this thesis is to develop generative AI models that address the challenge of anonymizing medical images. A key difficulty in this process is ensuring that the anonymized images remain useful for tasks such as diagnosis and pathology detection, while effectively eliminating the risk of patient re-identification. The research will aim to create versatile solutions that can be applied across various medical imaging modalities and clinical scenarios.

Practical Information: This 3-year PhD thesis will be supervised by Dr Hervé Delingette within the Epione team at Inria, Sophia Antipolis, France in close collaboration with the academic and industrial partners of the PLICIA project.
Competitive salary with comprehensive social benefits (national healthcare, health insurance, etc.), along with a dynamic and stimulating work environment.

Required Skills

- Master degree with strong competences in statistical learning and mathematical modeling, as well as knowledge in medical imaging, signal and image processing (Master 2 level).
- Solid programming and IT skills are necessary (Python or C++, bash scripting, version control systems).
- Strong communication abilities with fluent English (written and spoken)

Contact Persons:

Send a CV and motivation letter to:
Hervé Delingette (Inria)