Postdoc in AI for Computational Pathology

The Center for Computational Biology (CBIO) at Mines ParisTech / Institut Curie is looking for a highly motivated postdoc to work on a challenging project in the field of AI for Computational Pathology.
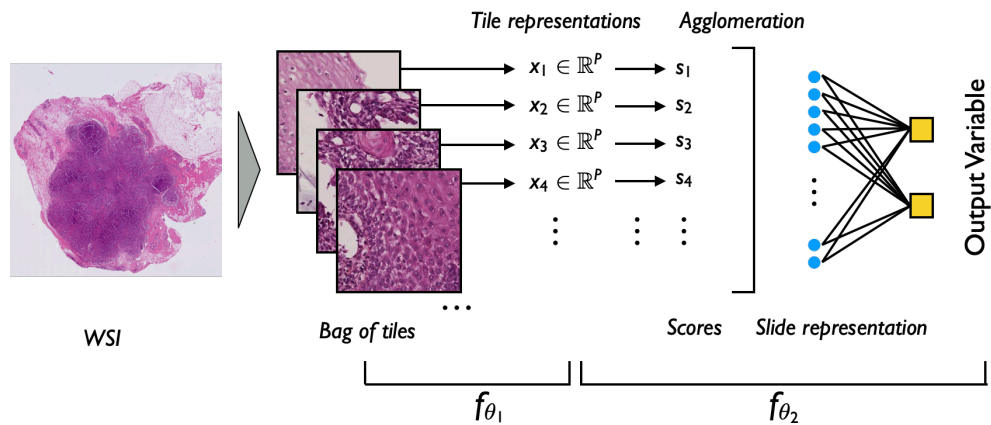

Figure 1 - Prediction of clinical variables from histopathology data by multiple instance learning.

Project description

Computational pathology is concerned with the computational analysis of stained tissue slides in view of predicting patient variables (such as survival or relapse risk) or genetic signatures. Artificial intelligence is today the major workhorse for Computational Pathology and has shown stunning successes in this field. On the other side, there are still many technological hurdles to be taken, and many methodological aspects to be addressed, relating to the latest developments in the field of Computer Vision.

On the application side, we have access to a number of challenging datasets for treatment response prediction, and the prediction of genetic signatures, thanks to our partnership with the Curie Hospital. These datasets allow us to transfer our methodological developments to real-world problems of major clinical importance.

The candidate will work in an interdisciplinary team with physicians, bioinformaticians and experts in machine learning.

Research group

The project will take place at the Centre for Computational Biology under the supervision of Thomas Walter (https://thomaswalter.github.io), a joint laboratory between Mines ParisTech, a major engineering school, and Institut Curie, a major hospital and research institution dedicated to cancer. The CBIO is a group specialized in machine learning for the life sciences with strong expertise in Computer Vision and Computational Pathology in particular. The group benefits from an exceptional scientific environment with immediate access to experts and collaborators in biology and medicine, enabling a stimulating interdisciplinary exchange. The laboratory is located in the center of Paris.

Candidate Profile

The candidate should have a PhD degree in Computer Vision, excellent programming skills and a promising track record. Some experience in biomedical image analysis is a plus, but not a requirement. The candidate should have strong communication skills and be capable of interacting with researchers from other fields (e.g. medical doctors, bioinformaticians, biologists).

Applications

The application file should contain:

- Cover letter
- CV
- List of publications
- Research statement
- Email addresses of 2 referees.

Applications are to be addressed to Thomas Walter: Thomas.Walter@mines-paristech.fr

The subject of the email should be (or contain): **Postdoc Application CBIO 2021**