Postdoc position at Institut Curie in Systems Biology Group

Machine learning for multi-modal cancer data analysis

Duration: 18-36 months with possibility of extension, starting immediately

Links http://curie.fr, http://u900.curie.fr http://sysbio.curie.fr, https://prairie-institute.fr/

Context
Institut Curie (IC) is one of the largest European institutions for cancer research with strong and old interdisciplinary traditions. It also includes a hospital specialized in cancer treatment, and therefore covers a continuum of expertise from fundamental research to patient care. It is located in the centre of Paris in a both cultural and scientific rich environment (http://curie.fr). IC hosts a large collection of tumor samples and structured medical data.
We are conducting a large-scale study of a lung cancer patient cohort and integrating multimodal data including multiomics (including spatial omics), pathomics, radiomics and other clinical data. Data for ~400 patients have already been collected. The main objective is twofold: build efficient predictors of treatment response and shed light on the mechanisms of tumor progression. The study involves four groups at Institut Curie : Emmanuel Barillot lab (omics), Irène Buvat lab (radiomics), ThomasWalter lab (pathomics) and Nicolas Girard lab (lung oncologist). The first three group leaders also hold chairs (or will soon for IB) at Paris of Artificial Intelligence Research Institute (https://prairie-institute.fr/).

Job description and skills
We expect a candidate with a strong background in statistics, machine learning, computational systems, biology or physics. The successful candidate should have experience in high-throughput data analysis in biology.
Ideally, the candidate should be able to demonstrate some knowledge of basic biological mechanisms involved in cancer and have experience of collaboration with biologists for solving concrete biological problems. He/she will have to: understand the biological and clinical questions related to cell fate decision, tumor heterogeneity, interaction with microenvironment, drug response; define the most appropriate statistical and/or machine learning approaches and develop them; carry out the analyses and discuss the results with biologists or clinicians.

The candidate must have a good knowledge in multidimensional data analysis in biology, and be proficient in high-level languages like Python or R. Familiarity and experience with existing systems biology methods and software would represent a strong advantage.

Excellent communication skills and team spirit, and an ability to work in autonomy are essential.

Fluent English both spoken and written is required.

Degree: **PhD level in computer science, machine learning, bioinformatics or systems biology**

Send CV, motivation letter, and contacts details of 2-3 references to recruitment.U900-SYSBIO@curie.fr and indicate as subject the reference “SB24DA application”.