

# Two years post-doctorate position for the project EASIER-COHORT: ExtrAction of Symptoms from electronic hEalth Records to create automatic COHORTs

Location: Lyon, France

Application Deadline: 30 November 2023

Starting Date: January 2024

Contract Duration: 2 years

Research team: collaboration between LIRIS (CNRS, University Lyon 1) and Center of Excellence in Respiratory Pathogens (CERP; Hospices Civils de Lyon, University Lyon 1, CIRI)/ PHE3ID

## CONTEXT

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We are looking to hire one Postdoctoral Researcher to work on the project EASIER-COHORT: ExtrAction of Symptoms from electronic hEalth Records to create automatic COHORTs funded by the SHAPE-Med@Lyon initiative. The candidate will have a contract with Lyon 1 University, and he/she will spend his/her time between the LIRIS and the CERP research laboratories.

Creating cohorts of patients in the health care domain is expensive and is time-consuming. Many data are available in the electronic health records (EHR) of each patient, especially in free-text field sections written by the medical staff. The EASIER-COHORT project aims at developing NLP techniques to retrieve automatically unstructured information, such as symptoms and comorbidities, to address epidemiological questions.

## ROLE

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As a part of the role, you will:

- Design, develop, and test text-mining algorithms for the detection of symptoms and comorbidities in unstructured text.
- Apply the algorithms to obtain symptoms and comorbidities in a structured table, on retrospective EHR of patients from the Hospices Civils de Lyon positively tested to influenza.
- Address an epidemiological question with the help of experts from the CERP, using machine learning algorithms for classification and feature selection.
- Write academic papers, technical reports and project deliverables.
- Attend academic conferences or project meetings to present your findings and serve as a representative for the project team.

## REQUIREMENTS

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- A PhD in Computer Science, preferably on Data Systems, Natural Language Processing, Digital Health, Artificial Intelligence, or related topics
- Provable fluency in at least one programming language, e.g., Python/R, Java, C++, Rust, etc.
- Fluency in the French language is mandatory, in order to develop NLP tailored for French documents
- Curiosity and passion for research and learning in general
- Previous experience in the healthcare domain is a plus

## APPLICATION

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To apply, send an email to Pr Marta Nunes at [marta.nunes@chu-lyon.fr](mailto:marta.nunes@chu-lyon.fr):

- Cover letter in which you describe your motivation and qualifications for the position
- Curriculum vitae, including a list of your publications and the contact information of references

Interested candidates can contact us to know more about the position before sending the application.