6-month internship in Data Science, 3D segmentation of lung

Employer Profile

The Université Côte d’Azur (UCA) is a Community of Universities and Higher Education Institution (ComUE) created in 2015 with a research mission and consists of 13 members and more than 30,000 students. The UCA unites the University of Nice Sophia Antipolis, public scientific and technological institutions, and other department. A winner of a grant from the French Initiative of Excellence (IDEX) program with its UCA-JEDI project, the UCA aims to increase its visibility and national and international stature. The long-term goal is to be counted among the top ten French universities comparable to the best in the world.

The UCA-JEDI project is steered by a committee consisting of the President of the UCA and four Program Directors (Education, Research, Innovation and International). The President is supported with UCA-JEDI by an executive assistant (DEA), and each Program Director has an Operational Program Director (DOP).

Job description

Lung cancer is the leading cause of death from cancer. Most of the efforts are dedicated to early-stage detection of lesions so that the prognosis for patients with lung cancer can be improved. Even though no lung cancer screening has been done in France so far, high-risks patients (i.e. heavy smoker with more than 30 packs per-year) are advised to be monitored. The management of the huge volume of images that would be generated in an automated lung screening program is the main obstacle to organize a national, knowing that 40% of radiologists retiring would not be replaced by 2025.

Université Côte d’Azur and hospital university of Nice are the promoters of the project LungScreenCT. The goal of the project is to provide radiologists with a reliable first-reading tool, based on artificial intelligence algorithms, allowing radiologists to manage the huge volume of images generated in an automated lung screening program. Artificial Intelligence would allow radiologist to focus on complex cases and spend more time with patients.
LungScreenCT project is in partnership with a French dynamical and ambitious start-up, well-known for its expertise in Artificial Intelligence applied on mammography. This project benefits from the environment of Maison de la Modélisation, de la Simulation et des Interactions (MSI), bringing scientific and technical skills in modelling and simulation in various scientific fields.

In order to develop this project, Université Côte d’Azur wants to meet the daunting challenges associated with the lung cancer and proposes a 6-month internship about infrastructure of medical technologies.

**Main tasks**

- Set up medical software environment
- Develop medical software plugins
- Deal with dicom specifications and PACS
- Build a user interface for radiologists

**Skills**

- Level Master 2, Computer Sciences and computer vision / medical image
- Mandatory:
  - C++
  - java
  - javascript
- Substantive knowledge and experience in the following areas:
  - Version Management Software (git)
  - Python
  - Dicom
  - PACS
  - Graphical User Interface
- Prior experience with Machine Learning/Deep Learning would be appreciated
- Interpersonal skills, well organized, rigorous, autonomous
- Interested in medical imaging (fin a state of the art below)

Let's do better!
**Location of the position**
Sophia Antipolis – Full time

**Application**

Candidates should send a resume and a cover letter to recruitement@univ-cotedazur.fr and stephanie.lopez@univ-cotedazur.fr. If they have any questions, candidates can contact stephanie.lopez@univ-cotedazur.fr

6-month internship.

Salary: 577,5€-1000€

Deadline for applications: January 10th, 2020

Starting date: February 15th, 2020