

Internship in Cell Tracking using Deep Learning - Lyon, France

Overview

We are looking for an internship student to develop community-oriented software for cell tracking. The goal of the project is to improve and extend the ELEPHANT/Mastodon cell tracking platform (<https://elephant-track.github.io>), by designing and implementing additional modules that will facilitate semi-automated tracking of cell lineages using deep learning. Specifically, this internship focuses on extending the ELEPHANT algorithm to develop a technique for backtracking single target cells.

Opportunities

The intern will learn 1) how to develop a deep learning-based algorithm for cell tracking, and 2) how to integrate it in community-oriented open source software, using large-scale microscopy data. Please visit our website (<http://www.averof-lab.org>) for details about our research group. We are based in the Institut de Génomique Fonctionnelle de Lyon (IGFL), at the ENS de Lyon, and our working language is english.

Skills

(required)

- Experience in **image analysis**, including **deep learning**
- Experience in coding with **Python**
- Scientific communication in **English**

(preferred)

- Experience in **Linux** environment
- Experience in image analysis using **ImageJ/Fiji**
- Experience in coding with **Java**

Terms of contract

The internship can start as early as January 2022 and will have a duration of approximately 6 months (dates can be discussed). The host laboratory will establish an internship agreement (*convention de stage*) and offer a stipend (*gratification*) according to the rules applicable in France.

Application

Please send a CV, a motivation letter describing your interests in this project, and optionally a link to a public code repository (e.g. GitHub) to Ko Sugawara (ko.sugawara@ens-lyon.fr) and Michalis Averof (michalis.averof@ens-lyon.fr). The position will remain open until a suitable candidate is found.