Whole-Cell Counting using Artificial Intelligence

Project Description:
Pathology AI is an internal research project in QCRI in collaboration with Sidra Medicine that develops tools and algorithms for supporting pathologist to make quick and accurate diagnoses. AI algorithms have been developed for the detection and counting of inflammatory cells in whole slide H&E images. The project has started using Cytomine - a web-based platform for hosting the project images and annotations. Cytomine enables collaborative annotations and analysis of multi-gigapixel images. It also allows the development of Apps for the automation of machine learning workflows.

Interns working on Pathology AI this summer will work on fine tuning the whole-cell detection model and developing a Cytomine App that automate the calls of the model.

For more information see

https://www.nature.com/articles/s41374-020-00514-0
https://doc.uliege.cytomine.org/dev-guide/algorithms/write-app

Project Type: Research and Engineering

Duties/Activities:
Deep Learning model training for whole-cell detection from images
Develop Cytomine Apps for different Deep Learning models.

Required Skills:
Basic understanding of Machine Learning
Good knowledge and development experience in Python

Preferred Intern Academic Level:
Preferred Intern Academic Level: 2nd, 3rd or 4th year CS students with high GPA

Learning Opportunities:
Work on advanced machine learning topics with applications to healthcare
Software design and engineering practices

Expected Team Size: 2 interns
Mentors

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