

Cytomine for data scientists and image analysis software developers

R. Marée^{1,2}, L. Rollus¹, B. Stévens¹, G. Louppe¹, J.-M. Begon¹, R. Vandaele¹, L. Wehenkel¹

¹Systems and Modeling, Dept. EE&CS & GIGA-Research, University of Liège, Belgium

²Quantitative Image Analysis Unit, Institut Pasteur, France

Cytomine (<http://www.cytomine.be/>) is a rich internet application for remote visualization of high-resolution bioimages (à la Google Maps), collaborative and semantic annotation of regions of interest using user-defined ontologies [Marée et al., Diagnostic Pathology 2013], and semiautomated image analysis using machine learning, web services, and proofreading [Marée et al., ISBI 2014].

In this talk, we will first present latest applications of the software as it is now being actively used by a dozen of research groups (more than 15000 images are stored and annotated by tens of users) in several application domains as illustrated below.

Then we will describe our latest developments to allow data scientists and image analysis software developers to use and extend the platform in various ways. In particular we will first show how to import/export data through our HTTP based RESTful API which ensures interoperability. We will also show how to integrate novel modules and third-party softwares/algorithms by leveraging web communication mechanisms and database software templates.

Cytomine will be available under an open-source software license early 2015.

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