

Gaëlle Garet

Postdoctoral Research Applicant in Bioinformatics

Data Mining
Sequence Analysis
Bioinformatics
Formal Concept Analysis
Grammatical Inference
Software
Enzyme Learning Protein
Knowledge Discovery
Visualization

About me

born on 16/03/1988
(26 years old)

France

gaelle.garet[at]gmail.com

Languages

french native
english fluent
german notions

Programming

Python, Java,
C, C++, OCaml
JavaScript

Interests

I did my main cursus in computer science and I discovered bioinformatics during my internship. I am very interested in working in a multidisciplinary environment including people from different scientific fields. My main interests are focused on knowledge discovery from biological sequences, which represents a highly topical challenge. During my Ph.D. I developed models and programs that classify enzyme's sequences using machine learning, especially grammatical inference and formal concept analysis. I am also open to problems like data visualization and manipulation.

Education

Dec. 2014	Ph.D. in Computer Science <i>Characterization and classification of enzymatic families using formal methods</i>	IRISA/INRIA, Université de Rennes 1
2011	Master's degree - Computer Science Speciality : From data to knowledge	Université de Rennes 1
2009	Bachelor's degree - Computer Science	Université de Rennes 1
2006	High school diploma specialized in science	Lycée Cornouaille, Quimper

Experience

Research

2011-2014	Phd student (3 years) <i>Using formal methods to characterize and classify enzymatic families</i> supervised by Jacques Nicolas and François Coste	IRISA/INRIA, Rennes
2011	Research Internship (6 months) <i>Using grammatical inference to model and annotate protein families</i>	IRISA/INRIA, Rennes

Collaboration and mobility

Since 2011	Station Biologique de Roscoff <i>Idealg (French national 10-year project)</i> http://www.idealg.ueb.eu/ <i>Biological data, Seaweed, Glycoside hydrolases, HAD</i> Collaboration with Mirjam Czjzek and Thierry Tonon	Roscoff, France
2013	Internship (1 month) Grupo de Procesamiento de Lenguaje Natural <i>Grammatical inference, natural language processing</i> Collaboration with Franco M. Luque	Universidad Nacional de Cordoba, Argentina
2013	Internship (3 month) Institut für Informatik <i>Logic programming using Answer Set Programming (ASP)</i> Collaboration with Torsten Schaub	University of Potsdam, Germany

Teaching

2013-2014	Computer science department, Université de Rennes 1 Algorithmics, Bachelor's degree (22h) Data analysis with R, Bachelor's degree (8h)
2012-2013	Computer science department, Université de Rennes 1 Programming (Java), Bachelor's degree (22h) Functionnal algorithmics, first year university degree (24h) Office automation, first year university degree (20h)

Publications

International peer-reviewed conferences/proceedings

Automated Enzyme Classification by Formal Concept Analysis

François Coste, Gaëlle Garet, Agnès Groisillier, Jacques Nicolas, Thierry Tonon
Formal Concept Analysis, 2014, Cluj-Napoca, Romania

A bottom-up efficient algorithm learning substitutable languages from positive examples

François Coste, Gaëlle Garet, Jacques Nicolas
The 12th International Conference on Grammatical Inference, 2014, Kyoto, Japan

Local Substitutability for Sequence Generalization

François Coste, Gaëlle Garet, Jacques Nicolas
The 11th International Conference on Grammatical Inference, 2012, Washington, États-Unis

Miscellaneous

2013-2014	Board of the Nicomaque association (hub of the PhD students associations of Rennes)	Rennes, France
2013-2015	Organization of a science popularization festival www.sciences-en-courts.fr	Rennes, France
2012	Realisation of a science popularization short-movie www.sciences-en-courts.fr/?page_id=1152	Rennes, France

other interests : baking, genealogy, computer graphics, travelling, reading, gymnastic, circus