

Théo Galy-Fajou

Physics/Machine Learning

🏠 Bredowstr. 38, 10551 Berlin, GERMANY
📞 +49 176 286 48 061
✉ theo.galyfajou@gmail.com

Education

2012 – 2015 **Master of Physics**
École Polytechnique Fédérale de Lausanne
Specialization in Particle Physics
Master thesis at the University of Edinburgh (UK)

2013 – 2014 **Minor in Computational Science and Engineering**
École Polytechnique Fédérale de Lausanne
Specialization in numerical analysis

2009 – 2012 **Bachelor of Physics**
École Polytechnique Fédérale de Lausanne
Third year spent at KTH (Stockholm, Sweden)

Work Experience

Aug 2016 - Current
Research Intern at Humboldt Universität zu Berlin, Berlin
Development of Bayesian SVMs

Developing a new Bayesian Model of SVM, both scalable and accurate, and augmenting it with multi-kernels, stochastic optimization and gaussian processes

Feb 2015 - Feb 2016
MRI Intern at Siemens Healthcare, Lausanne
C++ Sequence Development in MRI

Introduced a navigator controlling the motion of the patient with real-time feedback and synchronisation on a widely used MRI sequence. A second navigator was then introduced and processed to measure the motion and correct the coordinate system

Sep 2012 – Dec 2014
Teaching Assistant at EPFL, Lausanne and University of Edinburgh
General Physics

Guided groups of 1st, 2nd year students and master students from different faculties through tutoring sessions, covered a lot of fields from mechanics to electromagnetism as well as thermodynamics, (and particle physics for master students)

Jul 2012 – Sep 2012
Intern at Lancaster University, UK
Particle Physics

Treated data coming from a particle detector in Japan called ND280, part of the T2K neutrino experiment. Improved the reconstruction purity of the electronic neutrino without losing much reconstruction efficiency. Project in C++ and ROOT.

Computer Skills

Advanced Knowledge	Julia, C++, Git, L ^A T _E X, Matlab, Linux, ROOT, Photoshop, Illustrator
Good Knowledge	Python, R, Excel, InDesign, Premiere, Word
Basic Knowledge	mySQL, Flash, PureData, PHP, JavaScript, HTML5, CSS

Strong Points:

- Proficient in software development
- Strong understanding of physics and statistical learning theory
- Communicate knowledge efficiently

Publications

ECML 17'
Bayesian Nonlinear Support Vector Machines for Big Data F. Wenzel, M. Deutsch, M. Kloft
Conference track paper with oral presentation and creation of a public Julia Package

NIPS 16'
Scalable Approximate Inference for the Bayesian Nonlinear Support Vector Machine
F. Wenzel, M. Deutsch, M. Kloft
Paper accepted at the workshop of "Advances in Approximate Bayesian Inference"

Projects

Sep 2014 - Feb 2015
Master thesis in particle physics
Development of reconstruction algorithm for $e^+e^- \rightarrow t\bar{t}$ and $e^+e^- \rightarrow \tilde{t}\bar{\tilde{t}}$ (SUSY) events in the new linear collider project CLIC at CERN through Bayesian techniques

Feb 2014 – Jun 2014
Project in Computational Science
Simulation of a perfectly matched layer in an electromagnetic case coded in Matlab and using the discontinuous Galerkin method. I artificially created open boundaries on an EM wave simulation.

Feb 2014 – Jun 2014
Research on Long-Lived Particle in the LHCb experiment
Using generated samples I analysed the characteristics of long-lived particles, determined methods to recognize them and finally apply these algorithms on real data from LHC experiment

Sept 2012 – Dec 2012
Computational project at CERN in PACMAN group
Worked on a project in the CERN consisting in simulating the deviance of the beams due to the E.M. interactions

Communication Skills

French	Native speaker
English	Fluent (C2)
German	Good knowledge (B2)
Spanish	Good knowledge (B2)
Swedish	Basics (A2)

Miscellaneous

- Strong experience in graphic and web design (Graphic Designer and Communication Manager for different university associations) learned as an autodidact.
- Various summer jobs such as a packager in an organic products trading company and detasseler.
- Passionate by Dancing (swing, street dance and others), Theater, Graphic Design, Sports, Travelling and Bacon