

Guillem HURAUULT | Engineer

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Engineer and PhD candidate experienced in statistical Machine Learning applied to healthcare- and research-related projects. Additional background in Economics.

Education

- 2018–Today **PhD in Biomedical Engineering**, *Department of Bioengineering, Imperial College London, UK.*
Development of machine learning and mathematical models to predict eczema. Supervisor: Dr. Tanaka.
- 2016–2017 **MSc in Biomedical Engineering, Neurotechnology**, *Imperial College London, UK*, Distinction.
- 2014–2018 **Master's Degree in Engineering**, *Ecole Centrale de Lyon*, one of FRANCE's top engineering school.
- 2014–2016 **Bachelor's Degree in Economics**, *Université Lyon 2, FRANCE.*

Professional Experience

- October 2017 **Research Assistant**, *Department of Bioengineering, Imperial College London, UK.*
 - Today – Developed statistical machine learning models of eczema for personalised medicine, with a particular focus on: multilevel Bayesian models, regularised regressions, time-series, ODE, model-based clustering, image recognition.
 - Performed literature reviews, designed visualisations, communicated results in comprehensive reports, scientific articles and during conferences.
 - Co-supervised student projects, organised group meetings and maintained the group's website.
- 2019 – Today **Teaching Assistant in Mathematics**, *Imperial College London, UK.*
- May-July 2016 **Research Intern**, *Laboratoire de Neurosciences Cognitives (CNRS UMR 7291, Aix-Marseille Université).*
Analysed fMRI images using Machine Learning to understand the role of the oculomotor cortex in social perception.

Other Experiences

- 2019 – Today **Bioengineering PhD representative**, *Imperial College London.*
- 2014-2017 **Engineering student.**
 - Investigated the evolution of eczema using Machine Learning methods in the Biological Control Systems Lab.
 - Designed a genetic algorithm in a research project with LIRIS Lab (CNRS) to solve a scheduling problem.
 - Supervised a 6-person team for HEXADRONE to design and test a security system to avoid the crash of a drone.
- 2015 **General Secretary**, *Forum Perspectives.*
Organized a yearly career fair with 100 companies, 2000 students participating and a turnover of 250k€.
- 2015 **Treasurer, Communication coordinator and Editor** of Centrale Lyon's newspaper Piston Hebdo.
- 2015 Active committee member of Centrale Lyon's Cinema Society.
- 2013 International Workcamp in Biscay, SPAIN. Renovated an hermitage related to the Spanish Civil War.

Skills

- Languages ○ Native **French** ○ Fluent **English** ○ Notions in Italian and Spanish
- Programming **Working knowledge:** R (incl. Stan, ggplot2, Shiny, knitr), MATLAB (incl. SPM), \LaTeX .
Basic knowledge: Python, SQL, C# (incl. Infer.NET), Mathematica, HTML, Tableau, JavaScript, C++.
- Software Microsoft Office (incl. Publisher), Microsoft Visual Studio, Adobe Premiere, Gimp.

Publications

- [1] M. McAleer, I. Jakasa, **G. Hurault**, P. Sarvari, I. McLean, R. Tanaka, S. Kezic and A. Irvine, "Systemic and stratum corneum biomarkers of severity in infant AD include markers of innate and Th-related immunity and angiogenesis", *British Journal of Dermatology*, vol. 180, no. 3, pp. 586–596, 2019.
- [2] **G. Hurault**, M. Schram, E. Roekevisch, P. Spuls and R. Tanaka, "Relationship and probabilistic stratification of EASI and oSCORAD severity scores for atopic dermatitis", *British Journal of Dermatology*, vol. 179, no. 4, pp. 1003-1005, 2018.

Talks and posters available at <https://ghurault.github.io>