

Victor Lhoste

Third year PhD candidate at Imperial College London specializing on clustering and epidemiology.

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Skills

Statistics, Bayesian statistics, machine learning, clustering

Epidemiology, global health

R, Python, Pyro/Numpyro Git, bash, data visualization

Work History

2020/10 – 2024/06 **PhD: Epidemiology and biostatistics** *Imperial college London, UK*

Data science and mathematical modelling for global environmental health, funded by the School of Public Health and under supervision of Prof Majid Ezzati

Topic: Clustering of multiple cardiometabolic risk factors worldwide

- Collected and harmonized data from multiple surveys worldwide for NCD-RisC database.
- Developed multivariate methods for outlier detection for the NCD-RisC database.
- Identified cardiometabolic phenotypes using clustering methods and presented them with innovative visualization.
- Developed a Hierarchical Bayesian mixture models in Numpyro (Python) to compare cardiometabolic phenotypes in population subgroups.
- Graduate teaching assistant for MSc students in Statistics and Population Health modules

2020/01 – 2021/03 **Digital skills trainer** *The London School of Economics and Political Science, London, UK*

Training students and staff in R and Python at the digital skill lab

- Creating teaching materials
- Delivering workshops
- Provided online coding support

2018/04 – 2018/08 **Statistics research Intern** *The Regional Center for Research in Cancerology and Immunology, Nantes, France*

Worked on Multiple myeloma Cancer including

- visualization and processing data from RNA-seq single cell using R
- prediction of the distribution of multiplets thanks to machine learning and detection of multiplets for myeloma
- Strong interactions with biologists and statisticians

2017/10 – 2018/03 **Engineering project** *Sysnav, Nantes, France*

Worked on motion detection through an accelerometer called actimyo:

- Building a database of common motions (walk, run, fall)
- Detecting motions with machine learning in Python.

- 2016/01 – Private mathematics teacher** *Self-employed*
- 2021/01** Tutoring on a weekly basis several students from A level to "Classes préparatoires" (equivalent of Bachelor) in mathematics and physics during weekends and evenings.

Education

- 2019/10 – MSc: Health Data Analytics and Machine Learning** *Imperial college London, UK*
2020/10 Awarded with distinction.
Core modules: Clinical Data Management, Computational Epidemiology, Introduction to Statistical Thinking and Data Analysis, Machine Learning, Principles and Methods in Epidemiology and Data Sciences Research Project title: Group variable selection and repeated biomarkers measurements for cardiovascular diseases.
- 2017/10 – Master: Engineering: Applied Mathematics** *École Centrale de Nantes - France*
2020/10 Double degree with Imperial College London.
General Engineering degree specialized in applied mathematics.
Core modules: Statistical inference, numerical methods, probability, stochastic processes, computational statistics, Time Series Models, machine learning.
- 2016/10 – Bachelor: General Engineering** *École Centrale de Nantes - France*
2017/10 Obtained a Bachelor of Science in Engineering after following general engineering courses (Mathematics, IT, Signal processing, mechanics, physics).
- 2013/09 – "Classe préparatoire aux grandes écoles"** *Lycée Condorcet - Paris*
2016/07 Specific two-year undergraduate program focusing on Mathematics, Physics, and IT, leading to the admission to the French "Grandes Écoles". Final rank at national level top 7%.

Languages

French	
English	
Spanish	
Norwegian	

Publications

- Rami Al-Jafar et al. "Effect of Religious Fasting in Ramadan on Blood Pressure: Results From LORANS (London Ramadan Study) and a Meta-Analysis". In: *Journal of the American Heart Association* 10.20 (2021), e021560.
- Bin Zhou et al. "Worldwide trends in hypertension prevalence and progress in treatment and control from 1990 to 2019: a pooled analysis of 1201 population-representative studies with 104 million participants". In: *The Lancet* 398.10304 (2021), pp. 957–980.