# LANCELOT RAVIER

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# COMPÉTENCES

Programming skills

R, Python, Julia, Git, LATEX, HTML/CSS

Spoken languages

French (native), Portugese (native), English (fluent), Spanish (interme-

diate), Russian and German (beginner)

### **PUBLICATIONS**

Anemia and iron status in children living permanently at high altitude Writing in progress

· Targeted journal: American Journal of Hematology (see project "Expedition5300")

### **DEGREES**

### Master 2 - Statistics and Data Science

2025 - Now

Mean: in progress...

Université Grenoble Alpes

· Courses taken: Computational statistics (bootstrap, MCMC, Bayesian), High-dimensional statistics (multiple tests, Lasso, Ridge), Nonparametric estimation (kernel, regression functions), Machine Learning (Trees, SVM, random forests, deep learning using Python), Optimization (Python, Julia), Advanced biostatistics (Cox regression, mixed models, causality inference), Reliability (probability laws, Weibull, maintenance), Large language models (NLP using PyTorch/TensorFlow, Word2Vec, BERT), Geostatistics (kriging, Poisson process, Gibbs models).

### Master 1 - Statistics and Data Science

2024/2025

Mean: 15.665/20

Université Grenoble Alpes

· Courses taken: Probabilities, Statistical inference, Statistical tests, Machine learning (clustering, LDA, QDA, logistic regression, lasso/ridge models), Component analysis (PCA, PCF, Classification), Time series (ARMA/ARIMA), Linear models and GLM, Database (SQL), Programming (R, Python, Julia), Production of reproducible reports (RMarkdown, LATEX), Web interface (Shiny), Project management (git). jbr; jmark; Mean: 15.665/20j/mark;

### Bachelor - Applied Economics and Data Science

2021/2024

With honors

Université Grenoble Alpes

- · Rank: 1/341 (L1), 2/328 (L2), 1/60 (L3).
- · Mean: 17.443/20 (L1), 18.022/20 (L2), 16.328/20 (L3)

#### PROJECTS AND ACADEMIC EXPERIENCE

# Project "Expedition 5300" (Childrens)

May - September 2025

Supervisor: Samuel Verges

HP2 - INSERM u1042

· As part of the Expedition 5300 project, i began by reading scientific articles (in english) provided by my supervisor, then i contributed to the data processing and analysis of physiological and hematological data by choosing the right statistical methods to quantify the effect of altitude on the development of childrens living in Lima (150m), Cusco (3400m), Juliaca (3800m), and La Rinconada (5300m). I also participated in establishing detection tresholds and evaluating different epidemiological definitions of anemia and polypolycythemia. Finally, i summarized my results by creating figures, statistical summaries and vizualizations for related publications and communications.

# Prognostic biomarkers in colon cancer

 $Supervisors:\ Ekaterina\ Bourova\text{-}Flin$ 

Master 1,  $7^{th}/8^{th}$  Semester - 2024/2025 IAB - CNRS UMR 5309

· Comparison of colon cancer detection performance according to the antibody chosen using survival curves, log-rank test and Cox models, and training Machine Learning models to detect certains tumors requiring specific treatment using gene expression and methylation data.

# Data-challenge "Epiclock"

Supervisor: Florent Chuffart

Master 1,  $7^{th}$  Semester - 2024 IAB - CNRS UMR 5309

· Developement and comparison of statistical and machine learning models (penalized regressions, XGBoost, ElasticNet) applied to DNA methylation data. Optimization through cross-validation and performance evaluation using RMSE.

# Julia BlackJack game (Package)

Supervisor : Rémi Drouilhet

Master 1  $7^{th}$  Semester - 2024 LJK - CNRS UMR 5224

· Coded a Blackjack game in Julia without external packages; developed the graphical interface in Pluto using HTML; performed benchmarks between Julia/R/Cpp; implemented various functions to illustrate Julia's multiple dispatch versus R's single dispatch.

### Time series modeling of energy consumption and temperature in Tetouan (Morocco).

Master 1  $7^{th}$  Semester - 2024

Supervisor : Frédérique Leblanc

LJK - CNRS UMR 5224

· Modeling of electricity consumption and temperature for summer 2017 in Tetouan (Morocco) using hourly data (public database); implementation and comparison of forecasting models (manual/auto SARIMA, Holt-Winters ETS) with evaluation through AIC, BIC, and RMSE; analysis of the correlation between temperature and consumption (forecast, tseries, ggplot2).

### Determinants of Glyphosate use in France.

L3  $6^{th}$  Semester - 2024

Supervisor : Adélaïde Fadhuile

GAEL - CNRS UMR 5313

· Collected and merged databases on glyphosate purchases and agricultural land characteristics by department; identified the best linear model to analyze and quantify the influence of agricultural variables on glyphosate consumption in France.

### **Mathematics Teacher-Tutor**

2022, 2023 and 2024

Supervisor: Antoine Clerc

Faculté d'Economie de Grenoble

· Taught high-school level mathematics (Equations, Derivatives, Limits) to classes of 10 Economics—Management students at the Faculty of Economics and Management (UGA); developed teaching techniques to prepare lessons and effectively guide students during classes.

### WORK EXPERIENCE

Production line work – Welder (Night shift)

Schneider Electric

Summer 2019/2020/2021/2024 Ecofit / MasterTech Factory

Mail delivery La Poste Summer 2020/2021/2022/2023 Grenoble and Echirolles

Import-Export Assistant Schneider Electrics

April-May 2021 Ecofit Factory