Léo Burgund

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Ex medical student turned aspiring AI researcher.

Education

Master 1 & 2: Mathematics & AI 2024 – 2026

Paris-Saclay University (Mathematical Institute of Orsay), CentraleSupélec Paris

- Inferential Statistics, Bayesian Statistics, Optimization, Probability
- Machine Learning algorithms: Linear/Logistic Regression, (Ridge, Lasso), Decision trees, Random Forest, SVM, PCA, K-Means, Hierarchical Clustering
- Deep learning algorithms: MLP, CNN, RNN, Transformers
- Practical applications in Python and R

Double Bachelor's Degree in Applied Mathematics and Economics 2021 – 2024

Paris-Nanterre University

General Training Diploma in Medical Sciences 2016 – 2019

Faculty of Medicine, Sorbonne University

- Corresponding to the first 3 years of the french M.D. diploma
- Including one year at the University of Copenhagen through the Erasmus program

Work Experience

Research intern - Attention Growth for Transformers Apr. 2025 – Aug. 2025

INRIA Saclay, LISN, TAU Team

- Derived closed-form, on-the-fly growth rules based on the functional gradient to expand the attention inner dim. k, find its optimal new weights, plus a head-selection growth criterion.
- Built a custom Pytorch Growing Vision Transformer, experimented on CIFAR-10/100 and Imagenette using a GPU cluster.
- Tools: PyTorch, Slurm, timm, Weights&Biases, Linux, Git.

Medical extern 2018 – 2021

Assistance Publique - Hôpitaux de Paris

- Assisted medical residents in patient care and provided surgical assistance in the operating room
- Worked within diverse hospital teams and with patients, enabling me to develop strong communication skills, versatility, adaptability, teamwork, and rigor.

Projects

Unsupervised Analysis of Economic Data: GPD Growth 2024

- Conducted Principal Component Analysis (PCA) to reduce data dimensionality and identify key explanatory axes.
- Applied clustering methods (Hierarchical Clustering, K-Means) to segment countries into homogeneous groups

Study of Predictive Factors Associated with Charcot Disease and Feature Selection 2023

- Supervised models (Logistic Regression, SVM, Decision Trees, Random Forest) using Scikit-learn
- Feature selection (sequential selection, feature importance with Random Forest)
- Model evaluation using cross-validation and AUC

Skills

- Programming Languages: Python (PyTorch, wandb, Scikit-learn, Numpy, Pandas, Matplotlib), R, SQL, C
- Tools & Environments: Git, Latex, Linux, Slurm, Weights & Biases, Typst
- Languages: French (native), English (Fluent, TOEIC 955/990)
- Driver's License (Permis B)