

ELIES RAMON

Data scientist & Associate professor

✉ eramongurrea@gmail.com

🌐 [elies-ramon-7a5147363](https://elies-ramon-7a5147363.github.io)

🔗 [elies-ramon](https://github.com/elies-ramon)

🆔 0000-0002-7953-8115

👤 Elies Ramon

EXPERIENCE

Data scientist / Postdoc researcher

Catalan Institute of Oncology (ICO)

📅 2022 – 2024

📍 L'Hospitalet de Llobregat

I was in charge of several epidemiological studies on how microbiome and previous diseases influence the risk of cancer. My role entailed mentoring our Ph.D. students and performing statistical analyses and classical machine learning approaches, for the following projects:

- **inSCAN**: Big data project - Extraction, cleaning and statistical analysis of the [PADRIS](#) dataset (electronic health records from 150000 cancer cases diagnosed in Catalonia between 2012-2017, plus 1.5 million matched controls).
- **FUSOMAP**: Statistical analysis of the prevalence, geographical distribution, and prognostic risk of *F. nucleatum* infection.
- **Fundació La Marató de TV3** (Ref.202127-31): Microbiota composition as risk predictor in cancer patients infected with COVID.

Associate professor of Biostatistics

Universitat de Barcelona

📅 2022 – 2023

I taught the subject 'Biostatistics, Epidemiology and Introduction to Research' (B.Sc. in Medicine).

Machine Learning researcher

Universitat de Girona/MJN

📅 2021 – 2022

📍 Girona

I worked for the University of Girona in collaboration with the start-up MJN. Our goal was prototyping a support device for early monitoring and detection of Alzheimer. We used Python to train machine learning models from EEG time series data.

Associate professor of Machine Learning

Universitat de Girona

📅 2021 – 2022

I taught the subjects 'Intelligent management of medical data and knowledge' (B.Sc in Biomedical Engineering) and 'Machine learning' (Master's degree in Data Science).

Ph.D. in Genetics

Universitat Autònoma de Barcelona

📅 2017 – 2020

My dissertation, [Kernel approaches for complex phenotype prediction](#), was focused on optimizing supervised and unsupervised machine learning methods for biological problems.

EDUCATION

B.Sc. in Biotechnology

Universitat Autònoma de Barcelona

TECHNICAL SKILLS

- Algorithms, Algorithms Complexity, Statistics, Modeling
- Machine Learning, Supervised Learning, Unsupervised Learning, Dimensionality reduction, clustering, anomaly detection, clustering, time series.
- R, Python (Scikit-learn, Pandas, Numpy), C++, SQL, Unittesting, TDD, Git, Docker

PACKAGES



kerntools: Kernel Functions and Tools for Machine Learning Applications
available at [CRAN repository](#)



kernInt: Kernel Integration of Microbiome Analysis Methods and Data

PAPERS

Performance of a Shotgun Prediction Model for Colorectal Cancer When Using 16S rRNA Sequencing Data.

Statistical analysis

Performance

LASSO

Comparison between 16S rRNA and shotgun sequencing in colorectal cancer, advanced colorectal lesions, and healthy human gut microbiota.

Statistical analysis

Data science

kernInt: A kernel framework for integrating supervised and unsupervised analyses in spatio-temporal metagenomic datasets.

R

Data visualization

Time series

Machine learning

Metagenomics

HIV drug resistance prediction with weighted categorical kernel functions

Machine Learning

SVM

RF

PCA

LANGUAGES

Spanish



Catalan



English

