

CURRICULUM VITAE

Martin de Muniategui Climente

Contact: Comte d'Urgell street 237 6 4, Barcelona, Spain, +34622147669, marmuncli@gmail.com

PERSONAL DETAILS

Date of Birth: 17/10/1999

Nationality: Spanish

Notice Period: Three weeks

KEY SKILLS & COMPETENCES

- 2 years of experience in research centres
- Key responsibilities in statistics: Data analysis and modelling
- Main statistical methodologies: Survival analysis, longitudinal modelling, landmarking models, generalized linear mixed models, Bayesian inference and models, causal inference
- Main therapeutic areas: Alzheimer and oncology
- Main study phases: observational studies
- Main statistical software: R and SAS
- Main Modules used in SAS: Base, IML, Stat, GRAPH
- Main procedures used in SAS: DATASETS, SQL, UNIVARIATE, FREQ, MEANS, GLM, GENMOD, MIXED, PLOT, ANOVA, TTEST...
- Key responsibilities in programming: Organizing and cleaning datasets, implementing data analyses and a variety of models, creating tables and diverse kinds of plots
- International experience developed in: Spain (Spanish and Catalan) and the United Kingdom (English)

EMPLOYMENT

07/2023-10/2023 MRC Biostatistics Unit, University of Cambridge, Academy, United Kingdom
Precision Medicine
Position: Research assistant

Main Responsibilities

- Reviewing literature in the field of liquid biopsies, landmarking models, longitudinal models, pan-cancer studies and breast cancer
- Analysing clinical data from metastatic breast cancer patients
- Analysing data coming from circulating tumour DNA shallow WGSs
- Using bioinformatics tools to get copy number alteration profiles from raw WGS reads
- Extracting features from CNA profiles which are relevant for prediction
- Implementing dynamic survival models for patient prognosis that update with liquid biopsies
- Predicting the best line of oncological treatment for the patients given their profiles
- Main statistical methodologies: CNA profile analysis, landmarking models, random survival forests, survival analysis, longitudinal analysis, Bayesian mixture models
- Therapeutic areas + study phases: Oncology, observational data

Main achievements

- Communicating the project's background, objectives and route to a wide audience consisting of non-experts, clinicians and biostatisticians from diverse fields.
- Coordinating with more senior biostatisticians to define the analysis to be carried on and for implementing it.
- Successfully implementing the proposed steps of the project so far in a timely manner.

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03/2023 – 07/2023

Barcelonabeta Brain Research Center, research centre, Spain
Neurobiogenetics team
Position: Intern biostatistician

Main Responsibilities

- Giving support in statistical affairs in Alzheimer's disease research.
- Analysing data relating to brains' endophenotypes, enviromics and genetics.
- Giving statistical advice to project managers coordinating clinical trials.
- Advising on and implementing clinical trials randomizations.
- Cleaning and structuring datasets.
- Main statistical methodologies: Generalized linear models, principal component analysis and factor analysis, GWAS, Hidden Markov models.
- Therapeutic areas + study phases: Alzheimer, preventive clinical trials.

Main achievement

- Successfully implemented data analyses and models on the association between Alzheimer's disease and air pollution in observational data.
- Successfully advised on and implemented reproducible clinical trials randomization.
- Successfully communicating and coordinating with data managers, clinicians, project managers, wet lab technicians and other statisticians.

07/2021 – 09/2023

Institute for research in biomedicine, research centre, Spain
Orozco's lab
Position: Lab assistant

Main Responsibilities

- Using and developing algorithmic and statistical methods to better understand coarse-grained DNA structure and topology.
- Implementing theoretical biophysical models using C.
- Performing Metropolis-Hastings simulations to compute Maxwell-Boltzmann ensembles of DNA chains.
- Reviewing legacy code on structural biophysical simulations.
- Checking the plausibility of different DNA configurations using visual molecular dynamics.
- Main statistical methodologies: Gaussian mixture models, Markov chain Montecarlo, Metropolis-Hastings sampling, summary statistics, Maxwell-Boltzmann ensembles, statistical physics.

Main achievement

- Successfully implemented the proposed methods to better simulate coarse-grained DNA chains given their sequences and topology.
- Successfully fixed bugs on legacy code and implemented new features on it.
- Successfully communicating with senior members of the laboratory on tasks and obstacles.

EDUCATION

MSc in Statistics and Operations Research, Polytechnic University of Catalonia and University of Barcelona, Spain, 2022-2024.

Thesis: Dynamic prognosis in metastatic breast cancer using copy number features

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Grade: 8.6/10

BSc in Mathematics, University of Barcelona, Spain, 2017-2022.

Thesis: The differential geometry behind Maxwell's equations

Grade: 7.7 /10

BSc in Physics, University of Barcelona, Spain, 2017-2022.

Thesis: On model selection and statistical criticality

Grade: 7.5 /10

COURSES/PROFESSIONAL TRAININGS

- "Introduction to effective biomedical writing" – Barcelona Biomedical Research Park – Spain, 05/2023-06/2023
- "Complexity physics in living matter" – University of Barcelona's Institute of Complex Systems – Spain, 03/2022
- "Introduction to artificial intelligence" – University of Barcelona's Institute of Complex Systems – Spain, 04/2021
- "Crazy about biomedicine" – Institute for Research in Biomedicine – Spain, 01/2016-12/2016

CONFERENCES/SEMINARS

- Barcelona's informal seminary on mathematics – Barcelona, Spain – 2019-2021
- Meet-ups with the third cycle – Barcelona, Spain – 2018-2021

COMPUTER SKILLS

R, SAS, SQL, C/C++, Python, Linux/Bash, MS Office, LibreOffice and LaTeX

LANGUAGE SKILLS

- Spanish – native language
- Catalan – native language
- English – C2 level
- German – B1 level
- French – B1 level

HOBBIES/INTEREST

- I practise indoor rock climbing and yoga. I also enjoy hiking.
- I am currently learning german.
- I am an avid reader and a regular at the theatre, opera and cinema.
- I currently run a reading group on Hegel's Phenomenology of Spirit. I have run multiple reading groups in the past on different philosophical authors and/or topics, and also on literature.
- I take part in community organizing, raising awareness about social issues and helping people in need while at the same time creating cultural and leisure activities.

REFERENCES

- Solon Karapangiotis – Research associate, MRC Biostatistics Unit, University of Cambridge, solon.karapangiotis@mrc-bsu.cam.ac.uk
- Klaus Langohr – Associate professor, Polytechnic University of Catalonia, klaus.langohr@upc.edu