



Data Scientist

- 📍 Geneva, Switzerland
- ✉ david.munoztord@mailbox.org
- 🏠 david-munoztord.com
- 🔗 munozt0
- in david-munoz-tord

Skills

R	9 yrs.
Python	5 yrs.
JavaScript	3 yrs.
Bash	7 yr.
SQL	4 yrs.
Matlab	4 yr.
Data Analysis	9 years
Data Engineering	5 yrs.
Data Visualization	7 years

Libraries

- ▶ echarts, ggplot2, plotly, seaborn
- ▶ R Shiny, Dash, Streamlit
- ▶ tidyverse, data.table, dplyr
- ▶ TensorFlow, Keras, PyTorch, Scikit-learn
- ▶ Rstan, brms, JAGS
- ▶ H2O, XGBoost, LightGBM
- ▶ tidymodels, caret, mlr

Tools/Frameworks

- ▶ Git, Terminal
- ▶ Docker
- ▶ CI/CD
- ▶ AWS
- ▶ ML OPS
- ▶ ETL, NIFI

Summary

Dynamic and results-driven Data Scientist with a strong background in neuroscience, statistics, and data science. Experienced in developing and deploying comprehensive data solutions, collaborating with cross-functional teams, and leading innovative projects. Proficient in a wide range of programming languages and machine learning frameworks. Dedicated to continuous learning and staying at the forefront of technology trends.

Experience

Data Scientist

10/2022 - Present

Freelancer

- Led the development and launch of a scientific project in collaboration with EPFL, transitioning initial scripts into an accessible software to clients via the cloud.
- Offered technical consulting to a biotech start up, translating academic research into actionable solutions, while also advising on machine learning implementations.
- Within an NGO, collaborated with cross-functional teams to develop and implement data reporting infrastructure and implemented process automation best practices.

Full Stack Data Scientist

04/2022 - 01/2024

FlowBank

- Contributed as a key member of the data migration to AWS cloud, ensuring seamless transfer, and scalability.
- Conducted in-depth analysis to classify customers using Bayesian inference, revealing distinct segments and patterns for data-driven decision-making and targeted strategies.
- Engineered and deployed a sophisticated fraud detection system, leveraging neural networks and support vector machines to accurately identify fraudulent activities.
- Developed new internal tools for data analysts in the form of R packages, and provided training and support for their use.
- Designed and implemented a datawarehouse solution for efficient data processing and orchestration, contributing to streamlined data engineering workflows.
- Led the development of a comprehensive ML-Ops infrastructure, leveraging AWS cloud infrastructure for seamless deployment and scalability.
- Designed and maintained a data visualization dashboard in R Shiny, which allowed for easy monitoring of key performance indicators.

Lecturer in Biotatistics

09/2020 - 01/2022

University of Geneva

- Conducted lectures on statistics for the graduate program and mentored students in their research projects, providing guidance on statistical analysis and data visualization.
- Created and shared freely available data workshops in R and Python.

PhD Candidate in Computational Neuroscience

03/2020 - 01/2022

Campus Biotech

- Processed terabytes of data for a large scale of longitudinal clinical trials (EEG/fMRI signal and blood samples).
- Used various statistical methods to analyze large scale datasets: Hierarchical Bayesian modeling, Multivariate pattern analysis, and model-free reinforcement learning.
- Demonstrated commitment to medical data management protocols compliance and proficiency in grant acquisition.
- Collaborated with Caltech data engineers to implement ICA-based denoiseification for better identification of activation and artifact components in fMRI.

Internship in Computational Neuroscience

03/2019 - 03/2020

Geneva Neurocenter

- Developed and implemented computational models to study neural system mechanisms and dynamics.

Education

Ph.D. Candidacy in Computational Neuroscience

03/2020 - 01/2022

Campus Biotech - Switzerland

Topic: Computational modeling of addiction using neuroimaging data

MSc in Neuroscience

09/2018 - 03/2020

University of Geneva - Switzerland

Thesis: Denoising of high resolution fMRI signal using tICA

Complementary Studies in Computer Science

09/2017 - 06/2018

Smith College - USA

Capstone: Machine Learning for neuroimaging data

BSc in Cognitive Science

09/2014 - 06/2017

University of Geneva - Switzerland

Thesis: Early detection of ASD event related potentials

Languages

French	Native
Spanish	Native
English	Fluent
Japanese	Beginner

Technical Skills

- ▶ Data Structures and Algorithms
- ▶ Data Mining
- ▶ Machine Learning
- ▶ Linux System Administration
- ▶ Visualization for Scientific Data
- ▶ Spatial Analysis
- ▶ Bayesian Statistics

Extracurricular

- 🔗 Top 2% on [StackOverflow](#) (2024)
- 🔗 Top 25% on [GitHub](#) (2023)
- 🏆 Global Fellow scholarship (2017)
- 🚲 Co-founder of [Go-Fast](#), a socially responsible Bike Messenger cooperative in Geneva.

Projects

See my [github profile](#) for a more comprehensive list of open source projects.

Co-President

R, Python, Rust, JavaScript

– [We Data](#) is an organization that shares knowledge on code in data science (Blog, YouTube channel), give workshops about statistics, and do coding demonstrations. We also organize the [R-Lunches](#).

Maintainer

R, JavaScript

– Collaborated on the development of [echarts4r](#), a R package that expands the capabilities of R-based interactive visualizations with a powerful rendering engine, while enhancing flexibility and ease of use.

Collaborator

STAN, R, Python

– Collaborated on the Hierarchical Bayesian modeling of Decision-Making tasks library ([hBayesDM](#)). Built Q-learning algorithm for probabilistic selection task.

Maintainer

R, JavaScript

– Contributed extensively to the [firebase](#) integration package for R, empowering the Shiny user community by enabling user authentication and secure file storage through Firebase Storage.

Creator

R, SQL

– Created a shiny app ([DbVieweR](#)) simulating a database management system featuring functions like login authentication, save/create/delete tables, add/rename columns, using either a PostgreSQL or SQLite back-end.

Collaborator

R

– Integrated the caret ensemble for [reptree](#) (implementation of representative trees from ensembles of tree-based machines).

Collaborator

BASH, R

– Collaborated on the AFNI's functions for 3Dimensional Linear Mixed-Effects Regression ([3dLMER](#)). Fixed residuals output image by adding bottom tolerance.

Publications

See my [publications pages](#) for a comprehensive list my scientific publications.

References

[Pierre Saouter](#) ✉, Head of Data Science at FlowBank

[Ben Meuleman](#) ✉, Statistician at University of Geneva

[David Sander](#) ✉, Director of the Center for Affective Sciences

[Jose Nunes](#) ✉, Professor of Biostatistics at the University of Geneva

[Eva R. Pool](#) ✉, Senior Researcher at Campus Biotech