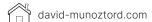
# **David** Munoz Tord







munoztd0



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# **EXPERIENCE**

#### CICAD ORGANISATION | DATA ENGINEER

Part-time: October 2022 - Present | Geneva, Switzerland

- → Worked closely with analysts across departments to design, build and deploy various initiatives within the data platform.
- → Developed, deployed and maintained data services using R and PostgreSQL.
- → Prepared and presented analysis for trimestrial reports.
- → Designed best practices to support continuous process automation for data ingestion and data pipeline workflows.
- → Automated amalgamation of data from spreadsheet revenue calculations and PDF reports reducing month end processing time from 2 days to 4 minutes.

### FLOWBANK SA | FULL STACK DATA SCIENTIST

Part-time: April 2022 - Present | Geneva, Switzerland

- → Managed Linux servers for Data Science team.
- → Developed ETL for on-premise PostgreSQL Data Warehouse.
- → Built ML pipelines to implement predictive models to detect fraud in clients behavior.
- → Demonstrated knowledge and execution of application programming interface development and test automation.
- → Updated data streaming processes for a reduction in redundancy and pipeline automation using
- → Utilized analytical and technical expertise to provide insights and proposals to support business improvements.

#### **UNIVERSITY OF GENEVA** | Lecturer in Statistics

Part-time: September 2020 - Present | Geneva, Switzerland

- → Taught theoretical aspect of statistical modelling.
- → Created freely available data wrangling tutorials and workshops in R and Python.

# **CAMPUS BIOTECH** | GRADUATE RESEARCH ASSISTANT IN NEUROSCIENCE

March 2020 - November 2021 | Geneva, Switzerland

- → Used various statistical methods to analyze large scale dataset: Hierarchical Bayesian modeling, Multivariate pattern analysis, and model-free reinforcement learning.
- → Researched and studied human health conditions and behavior.
- → Processed terabytes of raw MRI data for a large scale of longitudinal clinical trials.
- → Managed neuromedical data according to the BIDS regulatory compliance specifications.
- → Set up and maintained a Linux cluster for scientific computing for the lab.
- → Helped other lab members with their analysis and created online tools for data visualization.

### GENEVA UNIVERSITY NEUROCENTER | INTERNSHIP IN COMPUTATIONAL NEUROSCIENCE

August July 2019 - December 2019 | Geneva, Switzerland

- → Processing and analysis of EEG/ERP signal.
- → Training in the notions of model falsification and parameter recovery in a theory-driven approach to computational modelling.
- → Applied these new methods on open-source datasets. CompModeling.

### **SKILLS**

PROGRAMMING

Proficient:

R • Python • BASH • SQL

Experienced:

MATLAB • STAN • JavaScript

LIBRARIES/FRAMEWORKS

TensorFlow • Scikit-Learn • Pandas

• Spark MLib • PyTorch • Matplotlib •

Numpy • Dash • Tidyverse • Tidy-

bayes • Rstan • Caret • Glmnet •

jQuery • Node.js • Bootstrap

Tools/Platforms

Git • AWS • Docker • Azure

### **EDUCATION**

MASTER OF NEUROSCIENCES GENEVA NEUROCENTER

Sept 2018 - March 2020 | Switzerland

Coursework in Reinforcement learning, AI, Data science and Neuroimaging. GPA: 3.85

COMPLEMENTARY STUDIES IN DATA SCIENCE | UMASS AMHERST

Sept 2017 - June 2018 | MA, USA Received Global Fellow full scholarship.

Capstone project: Detecting planets via transits. SQL database querying.

BACHELOR OF SCIENCE | UNIVERSITY OF GENEVA

Sept 2014 - June 2017 | Switzerland

Relevant coursework completed in statistics and scientific programming.

Coursework

Algorithms • Data Mining • Machine Learning • Artificial Intelligence • Linux System Administration • Visualization For Scientific Data • Database Management Systems • Object Oriented Programming • Scripting Languages and Web Tech

# **PROJECTS**

#### WE DATA | JAVASCRIPT, R AND PYTHON - 2022

→ We Data is an organization that shares knowledge on code in social sciences (Blog, YouTube channel), give statistical courses, and do coding demonstrations.

### **DbVieweR** | JavaScript, R and SQL - 2022

→ Built a shiny app that simulates a database management system featuring functions like login authentication, save/create/delete tables, add/rename columns, using either a PostgreSQL or SQLite back-end database [DbVieweR].

#### hBayesDM | STAN, R AND PYTHON - 2021

→ Collaborated on the Hierarchical Bayesian modeling of Decision-Making tasks library [hBayesDM].

Built Q-learning algorithm for probabilistic selection task.

## 3dLMEr | BASH AND R - 2020

→ Collaborated on the AFNI's functions for 3Dimensional Linear Mixed-Effects Regression [3dLMEr]. Fixed residuals output image by adding bottom tolerance.

## REBUND | JAVASCRIPT - 2020

→ Developed an online interactive experiment to investigate chemo sensory preferences with the Revealed Preference paradigm [Rebund].

# **PUBLICATIONS**

Differential contributions of ventral striatum subregions to the motivational and hedonic components of the affective processing of the reward. Paper

Pool, E. R., Munoz Tord, D., Delplanque, S., Stussi, Y., Cereghetti, D., Vuilleumier, P., & Sander, D. Journal of Neuroscience (2022)

#### 3D-printed pacifier-shaped mouthpiece for fMRI-compatible gustometers. Paper

Munoz Tord, D., Coppin, G., Pool, E. R., Mermoud, C., Pataky, Z., Sander, D., & Delplanque, S. Eneuro (2021)

#### Early spatial attention deployment toward and away from aggressive voices. Paper

Burra, N., Kerzel, D., Munoz Tord, D., Grandjean, D., & Ceravolo, L. Social Cognitive and Affective Neuroscience (2019)

# REFERENCES

Pierre Saouter, Head of Data Science at FlowBank 🖂 Pierre.saouter@flowbank.com
Jorge Figueiredo, Head of Information Security at FlowBank 🛭 🖂 Jorge.figueredo@flowbank.com
Meirav Banon Skornik, Senior Analyst at the CICAD organisation 🖂 Meirav@cicad.ch
Ben Meuleman, Statistician at University of Geneva 🖂 Ben.Meuleman@unige.ch
Eva R. Pool, Senior Researcher at Campus Biotech 🖂 Eva.Pool@unige.ch

# **EXTRACURRICULAR ACTIVITIES**

- → Co-founder of Go-Fast, a cooperative society of Bike Messengers in Geneva.
- → Co-president of <u>La Rustine</u>, a non-profit organization promoting non-motorized mobility and self-sustainability in Switzerland.
- → Rock climbing, astrophysics and Linux enthusiast.

#### LANGUAGES

Fluent

ENGLISH | FRENCH | SPANISH

Basic

GERMAN | ITALIAN | PORTUGUESE | JAPANESE