



## Behavioural Scientist

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## 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

## Summary

Experienced Behavioral Scientist with a background in social cognitive psychology and a strong foundation in statistical analysis. Skilled in data interpretation, survey design, and experimental methodologies. Proficient in statistical analysis and visualization techniques for behavioral data. Passionate about enhancing social impact through evidence-based research and applied social sciences.

## Experience

### Data Scientist

10/2022 - Present

#### Freelancer

- Led the development and launch of a scientific project in partnership with EPFL, transforming initial scripts into a user-friendly software accessible to clients via cloud services.
- Provided technical consulting services to DuckRabbit, a Swiss startup specializing in cognitive and educational technologies, translating academic research from cognitive neuroscience and developmental psychology into tangible solutions, while offering expertise in machine learning implementations.
- Collaborated with cross-functional teams within an NGO to establish and maintain a data reporting infrastructure, focusing on survey data analysis and sentiment analysis applications. Implemented best practices for process automation, leading to improved efficiency in data management and reporting workflows.

### Data Scientist

04/2022 - 01/2024

#### FlowBank

- Conducted in-depth data analysis to classify customer behavior using Bayesian inference, enabling personalized strategies and enhancing customer experience.
- Designed and implemented ETL processes to streamline customer data processing and facilitate data-driven decision-making in marketing and product development.
- Developed internal tools for data analysts tailored towards understanding customer behavior patterns, utilizing statistical models and data visualization techniques for actionable insights.
- 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.

### Lecturer in Statistics

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 Social Cognitive Neuroscience

03/2020 - 01/2022

#### University of Geneva

- Led the analysis of extensive datasets from longitudinal clinical trials, integrating EEG/fMRI signals and behavioral measures to unveil insights into social cognitive and affective neuroscience.
- Utilized advanced statistical methods, including Hierarchical Bayesian modeling, Multivariate pattern analysis, and model-free reinforcement learning, to uncover behavioral patterns and neural responses.
- Ensured adherence to medical data management protocols and demonstrated proficiency in securing research grants.
- Collaborated with experts in data engineering from Caltech to implement cutting-edge techniques, such as ICA-based denoising for fMRI data, enhancing the identification of neural activations and artifacts.

### Internship in Computational Social Neuroscience

03/2019 - 03/2020

#### Geneva Neurocenter

- Developed methods for the computational modeling of behavioral data.

- ▶ ML OPS
- ▶ ETL, NIFI

## Education

### Ph.D. Candidacy in Social Cognitive Neuroscience

03/2020 - 01/2022

University of Geneva - Switzerland

Topic: XXX

### MSc in Neuroscience

09/2018 - 03/2020

University of Geneva - Switzerland

Thesis: XXX

### Complementary Studies in American Studies

09/2017 - 06/2018

Smith College - USA

Capstone: XXX

### BSc in Cognitive Science

09/2014 - 06/2017

University of Geneva - Switzerland

Thesis: XXX

## Languages

French	Native
Spanish	Native
English	Fluent
Japanese	Beginner

## Technical Skills

- ▶ Data Analysis
- ▶ Quantitative Research Methods
- ▶ Behavioral Data Interpretation
- ▶ Survey Design
- ▶ Experimental Design
- ▶ Statistical Analysis
- ▶ Visualization for Behavioral Data

## 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.

### Volunteer

R, JavaScript

Pro Velo

– Developed an interactive Shiny dashboard with [ProVelo](#) to enhance road safety analysis in Geneva. State-of-the-art platform offers insights and comprehensive accident data visualization. Versatile tool caters to a wide range of users, from policymakers to data enthusiasts.

### Co-President

R, Python, Rust, JavaScript

We Data

– [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

echarts4r

– 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

hBayesDM

– Collaborated on the [hBayesDM](#) package. A R package for computational modeling of behavioral data. Built the Q-learning algorithm for probabilistic selection task.

## Publications

**Investigating the effect of liraglutide on self-reported liking and neural responses to food stimuli.** Coppin, G., Munoz Tord, D., Pool, Cereghetti, D., Golay, A., Sander, D., & Pataky, Z. *Journal of Obesity* (2023) - [Paper](#)

**Differential contributions of ventral striatum subregions to the motivational and hedonic components of the affective processing of reward.** Pool, E. R., Munoz Tord, D., Delplanque, S., Stussi, Y., Cereghetti, D., Vuilleumier, P., & Sander, D. *Journal of Neuroscience* (2022) - [Paper](#)

**3D-printed pacifier-shaped mouthpiece for fMRI-compatible gustometers.** Munoz Tord, D., Coppin, G., Pool, E. R., Mermoud, C., Pataky, Z., Sander, D., & Delplanque, S. *Eneuro* (2021) - [Paper](#)

**Early spatial attention deployment towards aggressive voices.** Burra, N., Kerzel, D., Munoz Tord, D., Grandjean, D., & Ceravolo, L. *Social Cognitive and Affective Neuroscience* (2019) - [Paper](#)

## References

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

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

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

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

[Eva R. Pool](#) ✉, Professor at University of Geneva