Andrés **Acuña**

BIOSTATISTICIAN · DATA SCIENTIST

Geneva, Switzerland - B Work Permit

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Profile

With over 5 years of experience in R programming and statistical analysis, my passion lies in applying these skills to analyze datasets and extract valuable insights. Strong communication abilities complement my technical expertise, enabling effective collaboration and knowledge sharing.

Skills

Programming	**R programming with 5+ years of experience**, Base R, Tidyverse, ggplot2, dplyr, purr, Other programming languages : Bash, Python, MATLAB, Typst and SQL
Data Analysis	Experimental design and statistical analysis plans, t-tests, ANOVA (analysis of variance), Survival analysis, prediction, **Sample size calculation and hypothesis testing**
Data Visualisation	Interactive dashboards using Shiny Apps, **R markdown/Quarto report writing**
Data Quality	Developping and implementing Standard Operating Procedures (SOPs), **Computerized System Validation in the Biotechnology industry**, **GMP, GAMP5 guidelines**, ISO 13485 requirements for data handling, Good Clinical Practice (GCP)
Version Control	Git and SVN for code management, Data and code documentation
Bioinformatics	in-silico testing of qPCR primers and probes against DNA databases, parallel processing to enhance speed, bioconductor
Spoken Languages	**English, French and Spanish: Fluent**, German: level A2

Experience

Principal Biostatistician
VERACYTE INC.

Marseille, France
05.2019 - 08.2022

- Provided statistical counseling to up to five teams/clients developing biotechnology products, ensuring timely completion despite overlapping deadlines.
- Conducted statistical planning and analysis to evaluate the performance of qPCR kits, leading to 10 successful kit submissions compliant with in-vitro diagnostic regulation.
- Developed and deployed three interactive web applications (Shiny Apps) and two R packages for customized solutions, including data visualization, automated calculations, and reproducible results, in order to optimize data analysis.
- Validated two in-house developed computerized systems using the computerized system validation process in accordance with GAMP5 guidelines, collaborating closely with multidisciplinary teams including Quality Assurance and IT.
- Effectively led a three-member biostatistics team to ensure timely delivery of high-quality reports and results.
- Designed a bioinformatics pipeline for in silico testing of biological reactions using DNA databases, focusing on process optimisation for enhanced efficiency and speed.

Statistician
INSTITUT IMAGE

Chalon sur Saône, France
03.2016 - 07.2016

- Developed and executed a phobia therapy effectiveness evaluation on study participants.
- Conducted statistical analysis to evaluate the effectiveness of a phobia therapy.

Software Developer (MATLAB)
EUROPEAN CENTRE FOR RESEARCH ON HUMAN MOVEMENT

Montpellier, France
04.2015 - 07.2015

- Developed a brain-computer interface utilizing an EEG headset to investigate brain wave patterns through time series analysis.
- Established integration between hardware and software components to extract and analyze signals effectively.

Personal Projects

Statistical Report
⌗ Andres-AM/report-example

DESIGNER/DEVELOPER

- Example of **statistical report** using LATEX, **Rmarkdown**, ggplot2
- Web page link <u>here</u>

Survival Analysis
⌗ Andres-AM/survival-analysis

DESIGNER/DEVELOPER

- A brief step-by-step **survival analysis conducted in R**
- Used tools include quarto, ggsurvfit, survival, plotly, ggplot2, knitr
- Quarto report link <u>here</u>

WeightTrackeR
⌗ Andres-AM/WeightTrackR

DESIGNER/DEVELOPER

- **A Shiny App** for weight tracking and **data visualization** deployed with Shinyapps.io
- Used tools include modelr, dplyr, purr, shiny, lubridate, plotly, DT, and rsconnect
- Shiny App link <u>here</u>

NutriPlot
⌗ Andres-AM/NutriPlot

DESIGNER/DEVELOPER

- **Scatter plot** representation for optimized food selection using **Quarto**
- Used tools include dplyr, ggplot2, plotly, DT, quarto
- Report link <u>here</u>

Analysis of Newspaper headlines
⌗ we-data-ch/globlization_hackaton_training

DESIGNER/DEVELOPER   Sep. 2022 - Present

- **Newspaper headlines analysis** from www.20min.ch
- Used tools: scoring systems, quarto reporting, DT, crosstalk, plotly
- Report link <u>here</u>

TFScrappeR
⌗ Andres-AM/TFScrappeR

DESIGNER/DEVELOPER   Sep. 2022 - Present

- **Web scraping tool** designed to retrieve and summarize the most recent case laws from the **Swiss Federal Supreme Court**
- Tools used include **llama3**, dplyr, rvest, polite, purr
- Shiny App link <u>here</u>

Education

University of Montpellier
Montpellier, France

MSC. HEALTH DEVICE ENGINEERING   2014 - 2016

- Data analysis & statistics, mathematical engineering, signal and image processing

University of Montpellier
Montpellier, France

BSC. BIOTECHNOLOGIES   2011 - 2014

- Cellular and molecular biology, genetics, microbiology

Interests

- Member of the **<u>WeData Association</u>** (UNIGE) in data science and computer science.
- **Winner of the Public Prize** (19.06.24) at the Cultural Globalization **Hackathon**, Geneva.
- **<u>Presented an introductory Data Science video on data quality</u>**, in collaboration with the University of Geneva.