Andres Acuña Marrroquín

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PROFILE

With 4 years of experience in R programming and statistical analysis, my passion lies in applying these skills to understand data and uncover valuable insights. Strong communication abilities complement my technical expertise, enabling effective collaboration and knowledge sharing.

WORK EXPERIENCE

VERACYTE INC. | Principal Biostatistician
May 2019 – August 2022 | Marseille, France

➔ Provided expert statistical counseling to multiple teams/clients involved in the development of qPCR in vitro diagnostic kits. Despite facing overlapping deadlines, I ensured timely completion of projects by effectively managing resources and prioritizing tasks.

➔ Conducted comprehensive statistical planning and analysis to evaluate the performance of qPCR kits. As a result, I successfully led the submission of 10 kits compliant with in vitro diagnostic regulations, contributing to the company's regulatory compliance and product success.

➔ Demonstrated my technical proficiency by developing three ShinyApps and two R packages. These customized solutions enabled efficient data analysis, including advanced visualization, automated calculations, and reproducibility. By optimizing data analysis processes, I enhanced overall efficiency and productivity.

➔ Designed a bioinformatics pipeline specifically tailored for in silico testing of qPCR probes using DNA databases. My focus on process optimization led to significant improvements in efficiency and speed, enabling faster and more accurate testing of probes.

➔ Actively participated in the validation of two computerized systems developed in-house, ensuring compliance with GAMP5 guidelines. Through close collaboration with multidisciplinary teams, such as quality insurance and IT, I ensured the robustness and reliability of these systems.

➔ As a team leader, I successfully managed and prioritized the tasks of a three-member biostatistics team. By fostering effective communication and leveraging individual strengths, I ensured the timely delivery of high-quality reports and results, promoting overall team success.

INSTITUT IMAGE | Statistician
March 2016 – July 2016 | Chalon sur Saône, France

➔ Designed and implemented a comprehensive evaluation of phobia therapy effectiveness for study participants. This involved developing and executing a robust evaluation methodology. Conducted thorough statistical analysis to assess the efficacy of the phobia therapy, utilizing appropriate statistical methods to gain a comprehensive understanding of therapy outcomes.

➔ Played an active role in participant recruitment for the phobia therapy evaluation, ensuring the formation of a diverse and representative sample to enhance the validity of the study results.

➔ Improved the evaluation process by developing a tablet application, resulting in streamlined data acquisition and optimized participant evaluations in terms of efficiency and duration.

SKILLS

Programming
I am highly proficient in R programming, with 4 years of experience. I am well-versed in base R, R Shiny, Tidyverse, plotly, package creation, LaTeX, VBA, MATLAB, and SQL. This diverse skill set allows me to handle various data manipulation, analysis, and visualization tasks effectively.

Libraries/Frameworks
Base R • Tidyverse • R Shiny • plotly • modelr

Version control
Git • SVN

EDUCATION

MSc. Biomedical engineering | University of Montpellier
2014 - 2016 | France

BSc. Biotechnologies | University of Montpellier
2011 - 2014 | France

Coursework
Algorithms • Data Mining • Machine Learning • Artificial Intelligence • Linux System Administration • Visualization For Scientific Data • Biochemistry • Genetics • Cellular biology

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SOFTWARE DEVELOPER (MATLAB)

April 2016 – July 2016 | Montpellier, France

➔ Developed a brain-computer interface using an EEG headset to investigate brain wave patterns through time series analysis.
➔ Successfully established seamless integration between hardware and software components, facilitating efficient extraction and analysis of signals for a comprehensive understanding of brain wave patterns.

TECHNICAL SKILLS

➔ Statistics and Machine Learning: I possess expertise in experimental design, t-tests, ANOVA (analysis of variance), time series analysis, regression analysis, and prediction. I am also skilled in sample size calculation and hypothesis testing, allowing me to make informed data-driven decisions.
➔ Data Visualization: I excel in presenting data effectively through various techniques, including report writing and creating interactive visualizations using Shiny Apps. This enables autonomous data exploration and enhances the understanding of complex datasets.
➔ Bioinformatics: I have experience in conducting DNA database analysis for in silico testing of qPCR probes. Additionally, I am proficient in utilizing server resources and implementing parallel processing techniques to optimize run time for efficient data analysis.
➔ Data Quality: I am adept at implementing GAMP5 guidelines, ensuring data quality and compliance. I have a strong focus on automating processes and optimizing data workflows to streamline operations and improve efficiency.
➔ Data Wrangling and Version Control: I have extensive experience in data wrangling and utilizing version control systems such as Git and SVN for code management. This ensures proper organization, collaboration, and tracking of changes throughout the data analysis process.

REFERENCES

Olivier Biglia , Associate Director, Technical expert ✉ olivier.biglia@veracyte.com

Régis Perbost, Associate Director Biostatistician/Bioinformatician ✉ regis.perbost@veracyte.com

INTERESTS

➔ Hiking and Trekking (GR20, GR7, sections of the GR4, Tour des Aiguilles Rouges)
➔ Bikepacking (Nice - Toulouse, Tour of the Geneva Lake)
➔ Restaurant food volunteering at *Carrefour Rue*