ELENA SOFÍA PRIETO LEÓN

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PROFILE

Statistician and PhD candidate with a passion for applying statistical thinking to complex biological data. Experienced in analyzing high-dimensional data from omics studies and developing reproducible pipelines in R. I value open communication, take initiative in both technical and collaborative settings, and care deeply about the impact of my work on others. Eager to contribute my skills to research-driven teams in the pharmaceutical and life sciences industry.

PROFESSIONAL EXPERIENCE

Doctoral Researcher

Hasselt University & Johnson & Johnson Innovative Medicine, Hasselt, Belgium | 2021 – Present

• Implemented a semi-parametric density estimation method using wavelets combined with custom visualization tools in R, to interpret dimensionality reduction results of single-cell RNA-seq data.

• Defined a reproducible R pipeline for applying RUV-based batch correction methods to pseudobulk RNA-seq data, including an alternative adaptation of RUVIII for designs without technical replicates.

• Presented my work in one local and 3 international conferences in the biostatistics and bioinformatics fields.

Jr. Statistician – Data Business Leader

Nielsen A.C., Bogotá, Colombia | Mar 2018 – Nov 2019

• Led the implementation of regression and time series models in R to make an early prediction of historical sales data at a region level in Dominican Republic under a new enhanced sampling design, ensuring continuity and accuracy.

• Learned from regional and global case studies and introduced quality control alerts in the implementation of a new enhanced sampling design. The alerts contributed to delivering the periodically reported data 96% of the times ahead of schedule (versus a rate of 60% in previous product enhancement projects of the region).

• Used internal software, R, SQL, Google Sheets, and Google Slides to extract, analyze, and report data to the client service area.

• Communicated openly with stakeholders involved in every stage of the internal statistical process—sampling design, data collection, quality control, and modeling— in two Central American countries to investigate data inconsistencies and client questions.

Jr. Statistician – Product Enhancement

Nielsen A.C., Bogotá, Colombia | Oct 2017 – Feb 2018

• Supported the deployment of an enhanced sampling design by automating preprocessing steps of the new sampling frame in R and Python, reducing the time to report key deliverables by 80%.

• Migrated processes from licensed software (SAS) to open-source alternatives (R), ensuring cost-effective and scalable solutions.

• Reviewed and validated results from different sampling stages in Excel and R, contributing to successful implementation and QA of the enhanced methodology.

EDUCATION

PhD in Statistics (Ongoing)

Universiteit Hasselt, Belgium

• Dissertation: Summarization of single-cell methods and data integration with other baseline and omics variables

• Research focus: Dimensionality reduction, batch correction, and integration methods for scRNA-seq and RNA-seq data.

MSc in Statistics (Cum Laude) – July 2021

Katholieke Universiteit Leuven, Belgium

• Thesis: Identifying patterns of human sperm methylation using genome-wide technology

BSc in Statistics – April 2018

Universidad Nacional de Colombia, Bogotá, Colombia

• Thesis: EWMA quality control chart for multivariate functional data

SCHOLARSHIPS & HONORS

• Second place Student Presentation Award – Non-Clinical Biostatistics Conference, New Brunswick, USA – June 2023

• COLFUTURO Scholarship-Loan, May 2019 – MSc funding, KU Leuven

• Top 10% Graduate, BSc in Statistics – Universidad Nacional de Colombia (3rd in class)

SKILLS

Languages: Spanish (Native/C2), English (C1), Dutch (A2)

Software: R, LaTeX, Microsoft Office Suite, Python, SQL, JMP, SAS

INTERESTS

Speed skating (and more recently, ice skating), dancing, history, pickleball, and strategy games.