Carlos Ramirez Alvarez

Health Data Scientist

Bioinformatician with more than 10 years of experience in programming. Especially interested in giving data driven solutions and insights using machine learning and AI approaches and focused in Health Science data analysis.

Contact

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Education

Biologist (2012) Science Faculty, UNAM

PhD. in Biomedical Sciences (2019) CompBioLab IIB, UNAM

Languages

Spanish (native)
English (Proficient)
German (Basic)

Programming

R, Python, PostgreSQL, Java, html, C++, Perl, Matlab, Bash, Latex

Tools

Bioconductor, Rmd, plink, docker, star, Salmon, snakemake, Git, Asana, Slack, Google Suite, Office Suite,

PeriscopeData

Experience

BI & Data Analyst (2017 - 2018). Iguanafix. Business Intelligence, database management and data analysis.

Sr. Data Scientist Advisor (2018 - 2019). Mi ADN México. Developing a biopanel of genetic markers associated to sport & nutrigenetic profiles implementing data mining, machine learning and mathematical modeling.

Postdoctoral Researcher (2019 - present). Biomedical Genomics Group (BGG), iPMB, Medical Faculty Heidelberg, Germany.

Main Skills

- Biomedicine
- Mathematical modeling
- Programming
- Data Science
- Bioinformatic pipelines

- Machine Learning
- Deep learning
- Single Cell Sequencing analysis (sc-RNA, ATAC, CITE-Seq, multimodal)

Recent publications

Wrinkler F, Hipp A V, Ramirez C, …, Hermann C, Knolle P, Hoffmann M, Wohlleber W and Thimme R. **Enolase represents a metabolic checkpoint controlling the differential exhaustion programmes virus-specific CD8+ T cells**. *Gut.* Aug 4, 2023.

Ramírez C, Kumar Sharma A, …, Stanifer M, Boulant S, and Hermann C. **The endogenous cellular protease inhibitor SPINT2 controls SARS-CoV-2 viral infection and is associated to disease severity**. *PLOS Pathogens*. June 28, 2021.

Patents

Automated Generalized Search AGS ALGORITHM 1.0. A data mining tool to extract, weight, annotate, and summarize information regarding allelic variants available in public repositories. Link to document.

PPM Predictive Polygenic Model 1.0. A Generalized Linear Model for the interpretation of genetic data applied to nutritional, sport, and skin health status. Link to document.

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