

Sergio Carrascal Sánchez

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Personal Profile

Bioinformatician with a solid background in biology and experience in programming and data analysis. Specialized in the development of bioinformatics tools and pipelines, omics analysis, and the application of machine learning algorithms in biomedical and biotechnology environments. Interested in projects that combine data science, computational genomics, and the development of data-driven solutions.

Technical skills

Programming languages: Python (Pandas, NumPy, Biopython, Matplotlib, Seaborn), R (tidyverse, ggplot2), Bash, SQL, JavaScript (basic Node.js), React.

Bioinformatics and data analysis: Omics analysis (RNA-seq, metataxonomy, bacterial genomics), quality control, genome assembly and annotation, reproducible pipelines (Snakemake, Nextflow), sequence analysis (BLAST, FastQC).

Machine learning and data science: Predictive models, clustering, classification, dimensionality reduction, correlation and biological feature analysis, visualization of results.

Environments and tools: Linux, Git/GitHub, Docker, Jupyter, Conda, HPC, Vagrant.

Quality control and documentation: Version management, traceability, technical and scientific documentation (Markdown, LaTeX).

Professional Experience

September 2024 – June 2025
Salamanca, Spain

NEATHEA – R&D Technician - ICECYL

Participation in a project to develop functional foods from donkey milk for people with CMPA, applying bioinformatics and genomic analysis to characterize fermentations using metataxonomy and 16S rRNA sequencing, and performing comparative analysis of bacterial genomes to evaluate functional properties and optimize biotechnological processes.

March 2022 – August 2023
Salamanca, Spain

INTROPHARMA - Quality Assurance Technician

Comprehensive management of the pharmaceutical laboratory's quality system, including GMP documentation, process control, and data traceability. I led the review of reports, CAPAs, and internal audits, ensuring regulatory compliance and the reproducibility of experimental results.

September–December 2021
Salamanca, Spain

ECOITEC - Junior developer

Development of Python scripts and applications for task automation and data analysis. I implemented workflows in Linux using Vagrant and Git, integrating agile methodologies (Scrum, Jira) and ensuring the reproducibility and traceability of computational processes.

July 2020 – January 2021
Salamanca, Spain

AQUIMISA - Laboratory analyst

Performed microbiological analyses and quality control, applying techniques for culturing and identifying microorganisms. Participated in the implementation of standardized protocols and analytical data management, contributing to the reliability of results and the continuous improvement of the laboratory.

March 2020
Leuven, Belgium

KU Leuven - Research laboratory technician

I collaborated on an automation project for the detection and quantification of nematodes using microscopy and image analysis, utilizing the Supervisely platform to process, annotate, and train artificial intelligence models, applying computer vision and machine learning techniques to improve the accuracy and efficiency of experimental analysis.

November 2019 – March 2020
Sint-Katelijne-Waver, Belgium

SCIENTIA TERRAE - Research laboratory technician

I conducted viral synergy bioassays and managed greenhouses with plants and nematodes, applying molecular biology and data analysis to optimize growth conditions and pest management, including systematic sampling and identification of microorganisms, reporting results to support project continuity.

November 2019
Wageningen, Netherlands

WAGENINGEN UNIVERSITY - Research laboratory technician

I assisted a doctoral student in viral interaction bioassays in plants and supervised technical aspects of the greenhouse, ensuring the proper functioning of equipment and optimal growing conditions.

Education

2025	Master's Degree in Bioinformatics. International University of Valencia.
2024 – present (expected date: June 2026)	Specialization Diploma in Bioinformatics and Computational Genomics. University of Salamanca.
2021	Full-Stack Software Development. 4Geeks Academy.
2018	Bachelor's Degree in Biology. University of Salamanca.

Other studies

2020 - present	Bachelor's Degree in Philosophy. National Distance Education University.
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Volunteering and associations

Volunteer member of **RSG-Spain**, Regional Student Group of the International Society for Computational Biology (ISCB), collaborating in outreach and training activities.

Member of the **Spanish Society for Bioinformatics and Computational Biology**.

Languages

English: Full professional proficiency.

Spanish: Native language.