

# EdisonFlorez, PhD

Computational Lead — Data Scientist — Scientific Architect

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**Profile:** Computational Lead and Ph.D. scientist bridging the gap between math, physics and enterprise software. I specialize in architecting scalable, cloud-native platforms that integrate AI and first-principles modeling to solve complex biological challenges.

With a unique background spanning biotech R&D, finance, and sales, I translate ambitious scientific visions into commercially viable,

high-performance technologies—currently focused on engineering digital twins to drive innovation in AgriTech.

## Interests:



*"Chemistry by training, Physics by nature, speaking the language of Silicon."*

## Technical Skills:

- Python
- Git
- HPC
- SQL
- Docker
- ML/DL
- Linux
- AWS
- GenAI/LLMs
- Bash
- CI/CD
- Cheminformatics

## General Skills:

- Roadmap Strategy
- Agile Methodologies
- Mentoring/Leadership
- Storytelling
- Stakeholder Management
- Data Visualization
- Data Engineering
- Automated Reporting.

## Professional Experience

### ■ Computational Lead May.2024 - Present

Metrovate [[metrovate.com](https://metrovate.com)], New Zealand

- **Platform Architecture:** Architecting a multi-cloud, microservices-based computational platform for *de novo* peptide design. Orchestrating complex workflows (Target Prep, Docking, MD) using Nextflow, **Python**, and containerized environments (**Docker**).
- **Scientific Integration:** Integrating high-performance bioinformatics tools (e.g., **Boltz**, **RFDiffusion**, **DiffDock**, **GROMACS**, **QM/MM**, etc.) into a cohesive API-driven ecosystem to generate and screen bioactive protein “digital twins” for agricultural use.
- **Strategic Leadership:** Bridging the gap between biological discovery and software engineering, defining the technical roadmap, and overseeing the deployment of scalable AI/ML pipelines.

**Achievement:** Designed and deployed the company’s flagship “Digital Twin Pipeline”, reducing candidate design and discovery time from months to days by automating structural prediction and affinity scoring.

### ■ Sales Executive (Data Strategy Focus)

Sep.2023 - Jun.2025

Cordis [[cordishotels.com](https://cordishotels.com)], New Zealand

- **Process Automation:** Engineered automated **ETL pipelines** using **Python** to scrape, clean, and consolidate fragmented sales data, reducing manual reporting time by 35%.
- **Business Intelligence:** Developed interactive dashboards and queried CRM/PMS databases to identify high-value corporate segments, enabling data-driven targeting strategies.
- **Account Management:** Managed a portfolio of key corporate accounts, utilizing data insights to optimize revenue streams and improve client retention.

**Achievement:** Surpassed monthly sales goals and contributed to an **8% revenue increase** in the corporate segment by implementing a Python-backed lead scoring system.

### ■ Data Scientist

Aug.2021 - Aug.2023

HelicoBio [[helico.bio](https://helico.bio)], New Zealand

- **Full-Stack Science:** Orchestrated the full

software development lifecycle (SDLC) for plant biology research tools, optimizing performance using **Python** and **C++**.

- **Pipeline Engineering:** Built and validated scalable data pipelines to analyze genomic data and protein function, directly supporting wet-lab experimental design.
- **Cross-Functional Collaboration:** Translated complex biological requirements into technical specifications, ensuring seamless deployment of new analysis functionalities.

**Achievement:** Enhanced the protein screening workflow, reducing wet-lab validation cycles by **20%** and accelerating the identification of viable candidates.

## ■ Scientific Editor (Freelance)

**Apr.2023 - Dec.2023** Enago [[enago.com](https://enago.com)]  
**Apr.2018 - Dec.2018** MDPI [[mdpi.com](https://mdpi.com)]

- Provide high-level substantive editing for scientific manuscripts, refining technical clarity, structure, and adherence to high-impact journal standards.

**Achievement:** Consistently improved manuscript quality, contributing to a desk acceptance rate increase of **30%** for client authors.

## ■ Lab Assistant and Demonstrator

**Aug.2018 - Mar.2020**  
Massey University [[massey.ac.nz](https://massey.ac.nz)],  
New Zealand

- Developed Standard Operating Procedures (SOPs) for the Physics Lab and automated data analysis/reporting using **Jupyter Notebooks**, **Pandas**, and **Matplotlib**.

## ■ Data Scientist **Aug.2016 - Mar.2018**

EY (Ernst & Young) [[ey.com](https://ey.com)], Colombia.

- **Financial Modelling:** Designed and implemented complex mathematical models for banking clients (SAP environment) to optimize bond portfolios and address economic challenges.
- **Security & Automation:** Developed a **Python** module to parse, clean, and encrypt sensitive financial datasets, generating automated test cases for user training.

**Achievement:** The automated Python module **halved (50% reduction)** the time required to design and deploy new training sessions for banking staff.

## Academic Background

- **Ph.D. in Computational Physics,**  
Massey University, New Zealand  
**Jul.2023**
- **M.Sc. in Computational Chemistry,**  
University of Antioquia, Colombia  
**Dec.2014**
- **B.Sc. in Chemistry,**  
University of Antioquia, Colombia  
**Jul.2012**

## References

Available upon request

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Yours sincerely,

**Edison Florez, Ph.D.**  
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