Edison**Florez**, 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
- SQL
- Linux
- Bash
- Git
- Docker
- AWS
- CI/CD
- HPC
- ML/DL
- GenAI/LLMs
- 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], 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], 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], 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]
Apr.2018 - Dec.2018   MDPI [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],
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], 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,

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