Sebastian Franco Ulloa, Ph.D.
Data Scientist

With 7 years of programming experience and a Ph.D. in biocomputational sciences, Sebastian specializes in developing pipelines to streamline and analyze large datasets. He has worked as a data scientist, data engineer and bioinformatician, honing his skills in statistical modeling, industrial software development, cloud computing and project/team management. He thrives in spaces where he can learn new technologies and spar ideas with his colleagues. Sebastian approaches challenges with an analytical and compassionate mindset, actively seeking diverse perspectives to make well-informed decisions. He describes himself as a determined problem solver with a sense of humor, while his peers see him as disciplined, goal-oriented and caring.

Contact

✉ sebastian@sebastianfu.com

📞 +47 466 79 133

in sebastian-franco-ulloa

🌐 www.sebastianfu.com

cebasfu93

📍 Oslo, Norway

Skills

Statistical analysis

Machine learning

Data visualization

Team management

Storytelling

Teaching

Programming

Python

SQL

GCP/AWS

Docker

Terraform

Apache Airflow

Apache Beam

Languages

Spanish

English

Italian

Norwegian

Work Experience

Senior AI Engineer
DN Media Group. Norway.

From 2025

Developed and deployed AI products using LLMs, integrating DBT, BigQuery, and cloud-based solutions. Built NLP and time series forecasting models, contributed to Python package deployment, and managed GCP infrastructure with Terraform. Worked on data modeling, workflow automation, and cloud-based application debugging.

Senior Data Scientist - Consultant
Oslo University Hospital - Cytofit. Norway.

2024
2023

Developed a Python web application to clean and analyze omics data. The pipeline leveraged supervised AI methods to extract features and identify biomarkers predictive of clinical outcomes. Implemented front-end (Streamlit and Dash), database (MongoDB and PostgreSQL), API (FastAPI) and parallelization solutions to optimize the pipeline's performance. Led a team of 5 with agile methods (SCRUM). Secured 5 MNOK funding (2 MNOK from Innovation Norway).

Data Scientist and Backend Developer - Consultant
Resonyx. Norway.

2022
2021

Analyzed terabytes of high-frequency audio data to detect anomalies and baseline variations. Developed and deployed ML/AI models to predict failures in heavy hydropower machinery. Maintained an AWS cloud infrastructure, including databases, long-term storage, roles and monitoring systems. Led a team of 7 with agile methods (SCRUM).

Researcher
Italian Institute of Technology. Italy

2021
2017

Studied the interaction between drugs and biomolecules with ML/AI and statistical inference models, in Python. Participated in 4 drug discovery campaigns and identified hit compounds for different forms of cancer and bacterial infections. Authored 9 peer-reviewed publications and supervised 2 master's students.

Education

Ph.D. Biocomputational Sciences (*cum laude*)

2021
2017

Italian Institute of Technology. Italy.

Thesis title: Multiscale Modeling of Metal Nanoparticles for Biotechnological Applications.

BSc. Physics (GPA 3.59)

2017
2012

University of Los Andes. Colombia.

Thesis title: Simulations of a Weakly Self-Interacting Fluid Using Lattice Boltzmann Methods (Graded 4.00/4.00).

BSc. Chemistry (GPA 3.57)

2016
2011

University of Los Andes. Colombia.

Thesis title: Application of Molecular Mechanics for the Discovery of Novel Microbial IIA Topoisomerases Inhibitors (Graded 4.00/4.00).

Other Work Experience

Guest Researcher

2019
2018

Hyllerås Centre for Quantum Molecular Sciences. Norway.

Parallelized data analysis routines in high-performance computing (HPC) environments with PBS and Slurm. Honed Python skills for data analysis and visualization. Performed numerical simulations in C to study polymer aggregation. Worked in an international environment.

Research Intern

2016
2016

Italian Institute of Technology. Italy.

Participated in a drug discovery campaign for antimicrobial agents. Used numerical simulations to study interactions between drugs and proteins. Reported weekly to the principal investigator guiding the campaign.

Part-time Professor

2016
2016

University of Los Andes. Colombia.

Trained undergraduate students in analytical chemistry and laboratory best practices. Graded over 50 assignments per week including lab reports, quizzes and exams.
Grade from students: 3.72/4.00

Teaching Assistant

2016
2013

University of Los Andes. Colombia

Imparted 3-hour weekly lectures to 20+ students as a complement to the main sessions of various courses, including Quantum Chemistry, Computational Chemistry and Physical Chemistry II.

Other Certified Education

Certified Courses on Data Science

2020
2019

DataCamp

Career tracks on machine learning (93 hours), data science (100 hours) and Python programming (52 hours).

Certified Online Course on Leadership and Innovation

2020
2020

MIT Professional Education

40-hour course on how to incorporate IT technologies into business roadmaps. Technologies included AI, blockchain, IoT, cloud computing and cybersecurity. Coordinated three discussion forums, three reflection essays and two exams with other international participants.

Modern Physics at All Scales Summer School

2016
2011

Leiden University. The Netherlands.

Program for undergraduate students to explore various research disciplines and applied physics under the guidance of leading experts. It included talks, hands-on lab tours and cultural exchange events.

Special Achievements

1 **Full scholarship** from Becas Santander to enroll in an online course from the *Massachusetts Institute of Technology (MIT)*. The scholarship covered the enrollment fee of $2,300 of the MIT - Leading Digital Transformation certified course.

2 Winner of the **research grant** HP10CR7KHL from the *Italian SuperComputing Resource Allocation-Class C* (*ISCRA-C*). Earned 25,000 core hours from the SuperComputing Applications and Innovation (SCAI) center.

Familiar Programming Tools

Python >>>>>>>>>>>>>>>>>>

Scikit-learn

TensorFlow/Keras

Pandas

Numpy

SQLAlchemy/SQLite

Psycopg

Pydantic

FastAPI

Dash-Plotly

Streamlit

Matplotlib

Seaborn

Pytest/Unittest

GCP >>>>>>>>>>>>>>>>>

BigQuery

Cloud Storage

Cloud Functions

IAM

API Gateway

Artifact Registry

PubSub

Other >>>>>>>>>>>>>>>>>>

PostgreSQL

TimeScaleDB

GitHub Actions

MKDocs

Sphinx

Markdown/ReStructure Text

JupyterLab

VSCode