# Fernando Cruz

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cruz-f.github.io

## Experience

### **SOFTWARE ENGINEER** | OMNIUMAI, PORTUGAL

OCT 2022 – DEC 2023 (1 YR 3 MOS) | HYBRID | FULL-TIME
Senior software engineer focused on developing AI solutions for biotechnology.

- Data Science
- Data engineering
- Full-stack engineering

### **INVITED ASSISTANT PROFESSOR** | UNIVERSIDADE DO MINHO, PORTUGAL

SEP 2022 – FEB 2023 (6 MOS) | ON-SITE | PART-TIME

Assistant Professor of AI applied to biological data, bioinformatics, Docker, and Unix.

- Teaching
- Data Science
- Unix & Docker

### **SOFTWARE ENGINEER** | OMNIUMAI, PORTUGAL

JUN 2021 – SEP 2022 (1 YR 4 MOS) | HYBRID | PART-TIME

Software engineer at OmniumAI focused on the development of AI solutions for biotechnology.

- Data Science
- Data engineering
- Full-stack engineering

### **PH.D. STUDENT** | CENTRE OF BIOLOGICAL ENGINEERING, PORTUGAL

OCT 2018 – SEP 2022 (4 YRS) | ON-SITE | FULL-TIME

Ph.D. student at the Centre of Biological Engineering focused on developing tools and databases to analyze biological data.

- Data engineering
- Full-stack engineering
- Python software development

### **RESEARCH SCIENTIST** | ITQB-UNL, PORTUGAL

FEB 2018 – SEP 2018 (8 MOS) | ON-SITE | FULL-TIME
Research scientist at ITQB-UNL focused on the analysis of biological data and bioinformatics.

- Bioinformatics
- Python software development

### **INTERN** | CHR. HANSEN A/S, DENMARK

FEB 2017 – JUL 2017 (6 MOS) | ON-SITE | FULL-TIME

Internship at the world-leading bioscience company Chr. Hansen A/S focused on the analysis of biological data and bioinformatics.

- Bioinformatics
- Python software development

## Education

**PHD IN BIOMEDICAL ENGINEERING** | UNIVERSIDADE DO MINHO, PORTUGAL
2018 – 2022 (4 YRS)

**MASTER'S DEGREE IN BIOINFORMATICS** | UNIVERSIDADE DO MINHO, PORTUGAL
2015 – 2017 (2 YRS)

**BACHELOR'S DEGREE IN APPLIED BIOLOGY** | UNIVERSIDADE DO MINHO, PORTUGAL
2012 – 2015 (3 YRS)

## Skills

### Technical:

- Full-stack development
- Data Science
- Data Engineering
- Machine & Deep Learning
- Docker
- Git
- GitHub Actions
- Azure
- Databricks
- Python
- SQL
- NumPy/Pandas
- PySpark
- Scikit-Learn
- PyTorch
- Django
- PostgreSQL
- MS SQL Server
- JavaScript & TypeScript
- HTML & CSS
- React.js

### Languages:

- Portuguese (native)
- English (C1 / Full professional proficiency)

## Output & Awards

### Awards:

- Academic Merit Scholarship | 2020 | Universidade do Minho
  Ph.D. scholarship awarded for scholar merit and distinct academic results in 2019.
- 8th Startup Braga Acceleration Program | 2023 | OmniumAI
  Direct involvement as a senior software engineer at OmniumAI.

### Output:

- Scientific Paper | 2019 | Centre of Biological Engineering
  **Cruz F**, Lagoa D, Mendes J, Rocha I, Ferreira EC, Rocha M, Dias O. SamPler–a novel method for selecting parameters for gene functional annotation routines. BMC bioinformatics. 2019.
- Scientific Paper | 2019 | ITQB-UNL
  Pereira FC, Nunes F, **Cruz F**, Fernandes C, Isidro AL, Lousa D, Soares CM, Moran CP Jr, Henriques AO, Serrano M. A LysM Domain Intervenes in Sequential Protein-Protein and Protein-Peptidoglycan Interactions Important for Spore Coat Assembly in Bacillus subtilis. Journal of Bacteriology. 2019.
- Scientific Paper | 2020 | Centre of Biological Engineering
  **Cruz F**, Faria JP, Rocha M, Rocha I, Dias O. A review of methods for the reconstruction and analysis of integrated genome-scale models of metabolism and regulation. Biochemical Society Transactions. 2020.
- Scientific Paper | 2021 | Centre of Biological Engineering
  Pereira P, **Cruz F**, Rocha M. MEWpy: a computational strain optimization workbench in Python. Bioinformatics. 2021.
- Scientific Paper | 2022 | Centre of Biological Engineering
  Capela J, Lagoa D, Rodrigues R, Cunha E, **Cruz F**, Barbosa A, Bastos J, Lima D, Ferreira EC, Rocha M, Dias O. merlin, an improved framework for the reconstruction of high-quality genome-scale metabolic models. Nucleic Acids Research. 2022.