Jaldert François

PhD Candidate in Bioscience Engineering (Bioinformatics)

I am a **Bioinformatician (M.Sc.)** working on **Protein Engineering, Applied Machine Learning** and Statistical Analysis at STADIUS (Engineering) and CSB (Bioscience Engineering).

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Leuven, Belgium

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SKILLS

Machine Learning

Bioinformatics

Statistical Analysis

Pyhon, R, Bash, SQL

Databases, Data Mining

LANGUAGES

English
Native or Bilingual Proficiency

Dutch
Native or Bilingual Proficiency

AWARDS

Honours College Program - University of Antwerp (09/2017 - 06/2019)

FWO- SB Research Grant (11/2022 - 11/2026)

EDUCATION

Bioinformatics (Master)
KU Leuven

09/2019 - 06/2021 *Cum Laude*

Courses

- Electives: (1) Neural Computing **(2) Univariate Data Analysis and Modelling** (3) Gene Technology
- Thesis: "Exploring mutational patterns of evolution experiments: Meta-analyses of microbial data from the CAMEL database"

Biochemistry and Biotechnology (Bachelor)
University of Antwerp

09/2016 - 06/2019 *Summa Cum Laude*

Additional Course Work

- Honours College Program

WORK EXPERIENCE

PhD Candidate
FWO - KU Leuven

10/2021 - 11/2026 *Leuven*

Skills & Research Domains

- **Protein/Enzyme Engineering**, Proteomics, Computational Protein annotation
- **Applied Machine Learning** for predictive modelling
- **Applied Deep Learning** (ANN, CNN, GNN), n**eural network optimisation & LLM fine-tuning**
- **Data mining** and database development (SQL, NoSQL and Graph databases)
- **Statistical Analysis** & Software Engineering
- **Teaching Bioinformatics** (3rd Bachelor Bioscience Engineering) **& Introduction to Object Oriented Programming** (Master of Bioinformatics & Master of Artificial Intelligence)

Research Internship
University of Antwerp

08/2018 - 09/2018 *Antwerp*

Achievements/Tasks

- "Examining novel mutations in Charcot-Marie-Tooth"
- **DNA/RNA extraction & analysis**

PROJECTS

Enzymares - https://catalisti.be/project/enzymares/ (10/2021 - 10/2024)

- Development of a **toolbox for enzyme selection**, including a custom database linking UniProt, Brenda, Rhea, etc.
- Implementation and development of **machine learning models for enzyme (parameter) prediction**, and efficient enzyme screening

FWO - SB (10/2022 - 10/2026)

- Title: "**Optimising the enzyme discovery pathway through omics integration and AI**"
- Exploring current approaches for enzyme classification, reaction parameter prediction and substrate affinity
- Developing novel machine learning models for enzyme classification and reaction parameter prediction
- Development of an enzyme selection toolbox/software