JULIETTE AUDEMARD

juliette.aud@live.fr ⋄ 07 78 34 54 46 ⋄ GitHub Page ⋄ ORCID & Works

I am currently a Master's student in Bioinformatics and a trainee for the COMIC project, focusing on metabolomics and metabolism modelling. I aim to pursue a thesis on systems biology's thematics, starting by October 2025. Following my works on metabolic discrete models of bacterial communities, I'm highly interested in the methodological aspects of biological process modelling.

- Metagenomics
- Metabolic modelling
- Boolean networks

- Microbial communities
- Multi-omics integration
- Data Analysis

- High-level programming
- Object oriented program
- Machine learning

Professional Experiences

Trainee - Metabolic modelling of bacterial community, COMIC Project

Pléïade Team, Inria Bordeaux

Bordeaux, France 09/2024 - Present

• Study of bacterial interactions study in cyanobacterial community through metabolic modelling and metabolomics

Intern - Metabolic modelling of bacterial community, COMIC Project

UMR Nutrition Humaine, INRAE Clermont

Bordeaux, France 04/2024 - 09/2024

Intern - Identifying the target population for a treatment

Market Access, Abbvie Pharmaceutical

Paris, France 05/2023 - 08/2023

• Identification of french target population for second-line treatment of overactive bladder

SCIENTIFIC DISSEMINATION

Oral Talk

| Talk, in revision, Journées Ouvertes de Biologie, Informatique, et Mathématiques, Bordeaux | 2025 |
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| Flash talk, Journées Ouvertes de Biologie, Informatique, et Mathématiques, Toulouse | 2024 |

Poster

Journées Ouvertes de Biologie, Informatique, et Mathématiques, Toulouse

2024

Publications

Manuscript in preparation for submission to an international journal

2025

EDUCATION

Université Paris Cité

MSc, Bioinformatics

Paris, France
2023 - Present

• Relevant Projects

Command line interface to compute protein's solvent accessible surface Protein language model, phylogenetically informed multiple sequence alignment using transformers

• Thesis

Metagenome-scale modelling of freshwater cyanobacteria-centered community in the context of harmful blooms

Université Paris Cité

Bachelor, Sciences Biomédicales

Paris, France
2020 - 2023

• Thesis

Partnership between the mucosal barrier, mucus, mucins, and the intestinal microbiota

TECHNICAL SKILLS

Programming

Python, R, Bash scripting, reproducible pipelines and version control (Git), CLI

Genomics and Metagenomics

Genome analysis, functionnal analysis (annotations, KEGG/EC enrichment), metabolic modelling (Metage2Metabo, Gapseq)

Networks and Graph Analysis

Metabolic networks (SBML), gene regulatory networks (NetworkX, Cytoscape)

Machine Learning

Supervised learning (TensorFlow, scikit-learn), interpretability (SHAP)

Misc.

Languages

French (C2), English (C1), Mandarin (A2)