OCÉANE CASSAN

Currently searching for a Post-doctoral position

🎓 EDUCATION

2019 | 2018

University Claude Bernard
MSc in Computer Science specialized in Artificial Intelligence
📍 Lyon, France

2019 | 2014

National Institute of Applied Sciences (INSA)
Engineering degree in Bioinformatics and Modelling 📍 Lyon, France

💻 RESEARCH EXPERIENCE

2022 | 2019

PhD - BPMP, SIRENE team
Predictive biology and systems biology to learn the regulatory pathways in plants under climate change
📍 Montpellier, France

- Statistical inference of the gene regulatory network in *Arabidopsis thaliana* under elevated CO_2 and nutritional limitations from transcriptomic data
- Genome Wide Association study to identify genetic determinants of mineral status repsonse under elevated CO_2
- Developement of an interactive suite for transcriptomic analyses and the inference of regulatory networks
- References : Antoine Martin and Sophie Lèbre

2019

6 months research internship - LIRMM, MAB team
Supervised learning to predict chromosomic interactions in the human genome, based on CAGE data and 3C techniques
📍 Montpellier, France

- Reference : Laurent Bréhélin

2017

1 month research internship - LIRMM, MAB team
Sparse logistic regression to model transcription factor combinatorics for gene regulation in human
📍 Montpellier, France

- Reference : Laurent Bréhélin

💼 PROFESSIONAL EXPERIENCE

2018

Internship in quantitative biology - Nanolive SA
Development of software tools for the 3D detection and tracking of biological objects in label free images
📍 Lausanne, Switzerland

- Reference : Mathieu Frechin

CONTACT

✉ oceane.cassan@cnrs.fr

⊙ github.com/OceaneCsn

📞 +33 6 79 42 48 89

SKILLS

Transdisciplinarity : ability to understand and articulate biology, statistics and computer science to generate knowledge

Statistics : statistical learning models, regression, sparse regression, mixed models, machine learning, tree-based methods.

Biology : plant biology, next generation sequencing data analysis

Computer science : R, ggplot2, tidyverse, R package developement, Rmarkdown, Shiny, Python, LaTeX, Bash

Last updated on 2022-01-10.

TEACHING EXPERIENCE

2022 | 2021

Instructor of R for L3 plant biology students
Teaching material   ⚲ University of Montpellier, France
· Good practices and scientific   · Data manipulation and
  integrity around data analysis   visualisation in R

2022 | 2020

Instructor of Rmarkdown for M1 data science students
Teaching material   ⚲ University Paul Valery of Montpellier, France

2022

Regulatory network inference for M1 plant biology students
Statistical methods, and practical session
                     ⚲ University of Montpellier, France

SELECTED PUBLICATIONS AND POSTERS

2021

Inferring and Analyzing Gene Regulatory Networks from Multi-Factorial Expression Data: A Complete and Interactive Suite
Cassan, Océane, Sophie Lèbre, and Antoine Martin. 2021 BMC Genomics 22 (1). https://doi.org/10.1186/s12864-021-07659-2

2019

Probing Transcription Factor Combinatorics in Different Promoter Classes and in Enhancers
Vandel, Jimmy, Océane Cassan, Sophie Lèbre, Charles-Henri Lecellier, and Laurent Bréhélin. 2019 BMC Genomics 20 (1): 1–19. https://doi.org/10.1186/s12864-018-5408-0f