

DUVERMY Arnaud



27 years old
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arnaud.duvermy@gmail.com
Driving license (B)
Fire fighter since 10 years
Trained in first aids
2023 Run'in Lyon Finisher (21km)
English level: Advanced (TOEIC 2021 - 815)

DATA SCIENTIST & SOFTWARE DEVELOPPER IN BIOLOGY

WORK EXPERIENCE

Partnership between Lesaffre's Data Science Team and CNRS

LBMC/Lesaffre | Lyon, France | From Feb. 2022 to Feb. 2024

- Missions Datascience Lesaffre (60%) :

Development of a haploid strain detection algorithm using random forest with NGS data. Development of Nextflow pipelines (Metagenomics, Transcriptomics) designed to be launched from custom API and connected to Cloud storage.

NGS data mining and modeling.

- Mission LBMC (40%) :

Development of a statistical framework for simulating and analyzing high-throughput RNAseq data with fixed, mixed, and interaction effects. [HTRfit - High Throughput RNAseq model fit](#)

Multi-omic analysis to study thermal stress on coral reef ecosystem

Haruko Takeyama | Tokyo, Japan | From January 2021 to June 2021

Integration of metagenomics and metatranscriptomics data to study thermal stress on coral reef ecosystem. Benchmarking of metagenomics tools using CAMI datasets.

Tutors : Haruko Takeyama, Keigo Ide, Rieka Chijiwa

Multi-omic analysis to study the impact of nucleosomes on condensin in mitosis

ENS | Lyon, France | From May 2020 to July 2020

Development of nextflow pipeline for Mnase-seq, ChIP-seq, Calibrated ChIP-seq. Integrative analysis to quantitatively assess the spatial covariation between condensin and nucleosomes.

Tutors : Pascal Bernard and Laurent Modolo

Analyse of NGS data from herbaria sample to understand viruses history evolution

CIRAD | Réunion, France | From May 2019 to December 2019

Build old virus consensus sequences using variant calling. Analyze post-mortem degradation. Phylogenie and Bayesian inference.

Tutors : Jean Michel Lett and Adrien Rieux

TRAININGS

Formation Introduction au Deep Learning - FIDLE CNRS

2022-2023 / 40h

Keras, Tensorflow, fine-tuning, CNN, transformers, encoder

Network statistical analysis

Nov. 2023 / 20h

Manipulating, visualizing, and sampling networks, statistical description, random graph models, community detection (spectral clustering).

EDUCATION

University Claude Bernard Lyon 1

2015 - 2018

Bachelor of Science, Technology, Health.
Major in Bioinformatics Statistics and Modeling

- Descriptive and inferential statistics
- Genetic, Microbiology, Ecology
- Algorithmic for bioinformatics

University Claude Bernard Lyon 1

2018 - 2021

Master of Bioinformatics, Methods & Molecular analysis

- Database management system
- Machine learning
- Omics (RNA, DNA, proteomique)

Master's project - Dashboard to visualize and analyse public and personal transcriptomic datasets

BF2i, Lyon | From Octob 2020 to Nov 2020

BigData, R-Shiny, Tydiverse, Plotly

<https://github.com/aduvermy/shiny.git>

Tutors : Nicolas Parisot

Student jobs

CDI | Carrefour | 2016 -2019

CDI | AgriEmploi01 | 2020 - feb. 2022

COMPUTER SKILLS

Operating system

Windows, Linux and Mac OS

Informatics Languages

Python, bash, R, HTML/PHP/CSS, SQL, XPATH/Xquery, SPARQL

Reproducibility/maintainability

Docker, Singularity, Nextflow, Snakemake, Unit tests, CI/CD

Data visualisation

Circos, ggplot, matplotlib, shiny, plotly

Cloud Infrastructure

Cloud storage experience with OVH S3, AWS S3