

Anthony Bertrand



Contact

✉ anthony.bertrand@pasteur.fr

Languages

French mother tongue
English fluent
Russian intermediate
German intermediate
Irish beginner

Programming

Python (pandas, sklearn, tensorflow)
R
JavaScript (tensorflow, Node.js)
Java
Matlab
OCaml
Git
L^AT_EX
Unix
SQL
C++
Unity

Profile

A motivated and curious student with a passion for computer science and its application for biology. I'm very interested in academic research and teaching.

Education

2019 - 2022	École Centrale de Nantes : Engineering School Bioinformatics, Statistics, Machine Learning, Applied Mathematics	Nantes, France
2017 - 2019	Classe Prépartoire - Mathematics and Physics - Computer Science Lycée du Parc - MPSI and MP*	Lyon, France
2017	Baccalauréat (High School diploma) Lycée du Parc - Science-Biology Section & Mathematics	Lyon, France

Experiences

2022	Trinity College Dublin: Identifying differences in immune response according to socioeconomic status (SES) using the Milieu Intérieur <i>Master student internship</i> • Integrating transcriptomic data to study the interindividual variability in immune response.	Dublin, Ireland
2021 - 2022	Using Kernel Methods and Spectral Clustering to analyse single-cell transcriptomics data. Nantes, France <i>School project with a PhD student.</i> • Building a workflow to perform a spectral clustering on scRNA-seq data using kernel methods.	
2021	Institut Pasteur: Study of methods for inferring transcriptional networks <i>5 month internship with the Translational Immunology Unit for the "Milieu Intérieur" project</i> • Comparison of gene expression regarding donors' characteristics (age, sex, smoking status) • Review of tools for inferring transcriptional networks and tests on the data from the Milieu Intérieur project and from the GTEx consortium. • Gene expression analysis of data from the NanoString Technology for SARS-CoV-2 infection.	Paris, France
2020 - 2021	Ifremer: Study of epigenetics in algae using nanopore sequencing <i>Student project with the Algae Physiology and Biotechnology Laboratory of IFREMER</i> • Literature search on epigenetics and sequencing techniques • Benchmark of tools to study DNA methylation from the output of the MinION technology	Nantes, France
2020	Axians: Application of Machine Learning models for mission-critical services <i>5 week internship, R&D Engineer</i> • Integration of AI libraries (Tensorflow.js) for a communication application • Review of mathematical concepts and methods (NN, UMAP, t-SNE). • Realization of a React application integrating an object detection model.	Lyon, France
2019 - 2021	Volunteering within AIDES Association <i>An association that fights against HIV & Hepatitis</i> • A volunteering in which I discuss about prevention, protection, treatments, the life with HIV and the risks around STDs with people that came for a screening.	Nantes, France