Tanguy **VIVIER**

CONTACT

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ADDRESS

136 Chemin de Rosset,
Saint-Jeoire Prieuré,
73190,
France

INFO

French
22 years old
Driver License
Workplace First-Aider

LINKS

Github: TyWR
Linkedin
Website

LANGUAGES

French (native)
English (fluent)

TOOLS

Linux/MacOS
NeoVim
ZSH
LaTeX

HOBBIES

Music
(Bass and Drums)
Swimming
Travelling
Cooking

TECHNICAL SKILLS

Strong knowledge in applied Mathematics (Machine-Learning, Statistics, Signal Processing, Optimization, Calculus...) and Computer Science. Experience in medium-scale software engineering projects involving data-science and signal processing skills.

DATA-SCIENCE:

Proficient	Python (Matplotlib, SkLearn, Numpy, Pandas, Flask)
Familiar	Matlab, R, d3.js, PyTorch
Knowledge	Tensorflow, Spark, Hadoop, AWS S3, Redshift

SOFTWARE ENGINEERING:

Proficient	git, Unix
Familiar	SQL, Docker, C/C++, bash, JavaScript, HTML/CSS, Parallel Processing
Knowledge	Haskell, Scala

CURRICULUM

2016-2019 **INGENIEUR CIVIL DES MINES**
MASTER OF SCIENCE AND EXECUTIVE ENGINEERING
One of France's top Master's level engineering schools. Multidisciplinary approach that harmoniously blends basic scientific and technical education, technological education, and a solid initiation to the economic, social and human realities of industry.
Ecole Nationale Supérieure des Mines de Nancy, France

2018 **ERASMUS EXCHANGE**
Semester abroad during my engineering master degree in France within the faculty of Information Technology and Electrical Engineering
NTNU Trondheim, Norway

2014-2016 **CLASSES PREPARATOIRES AUX GRANDES ECOLES**
Preparatory class to take national competitive exams for admission to the highly selective French engineering schools "Grandes écoles". Mathematics, Physics, IT.
Lycée Berthollet, Annecy, France

EXPERIENCES

Feb. 2019 **SOFTWARE ENGINEER / DATA SCIENTIST (6 MONTHS)** Geneva, Switzerland
Fondation Campus Biotech Geneva
- Developing user-friendly softwares for neurophysiological data analysis, with a focus on frequency and time-frequency analysis, source separation (PCA, ICA...).
- Developing large scale computing workflows using parallel processing and their deployment tools (Docker).

Utilized git, Python for data analysis and user interface, Docker.

Jun. 2018 **SHORT INTERNSHIP (2 months)** Kyushu, Iizuka, Japan
Kyutech
Research internship on the subject of spintronics, at the FUKUMA Laboratory, by carrying out experiments and data analysis.

2017-2018 **JUNIOR-ENTERPRISE CONSULTING** Nancy, France
Mines Services
Internal auditor of a student association in charge of giving consulting work to clients by giving missions to students.

PROJECTS

OPEN SOURCE VISUALIZATION TOOL FOR EEG DATA-ANALYSIS

`https://github.com/fcbg-hnp/mnelab`

◦ Carrying out the development of an open-source graphical user interface to visualize and process raw neurophysiological data. The goal was to present an easy-to-use interface for researchers to easily perform complex tasks such as cleaning the data, filtering, applying complex signal processing methods and visualizing data. It featured development of custom visualizations and interfaces for spectral analysis (PSD and spectrograms) and source-separation (ICA).
◦ Contributing to a wide open-source project for neurophysiological data processing.
◦ Working alongside researchers to identify needs and bottlenecks in the user experience of the product.The software is now being used by researchers at Campus Biotech to process their data.
Utilized: Python (PyQT, Matplotlib for interactive graphs, Numpy MNE), advanced signal processing

FOOTBALL TOURNAMENT PREDICTION

Modelling a football tournament using Poisson regression models by giving teams offensive and defensive attributes, and simulating outcomes to predict the winner. At the end of the project, we were able to give a probability of winning for each team with a confidence interval. The project involved the transformation of the raw data and the conception of a model.
Utilized: R, Advanced Regression Models, Monte-Carlo Simulations

ROOM HEATING OPTIMIZATION

The goal of this project over the span of a year, was to find an optimal polygon shaped room (square, pentagon etc.), in order to maximize the average temperature.
◦ Modelling the situation with heat equation, using adaptive meshes
◦ Developing optimization algorithms from scratch
Utilized: Python, Matlab, Matlab to Python pipeline

AURORA FORECAST VISUALIZATION

`https://northern-lights.herokuapp.com/`

Personal project involving the development of a website for that displays the northern lights forecast on an interactive map. The application extracts, transform and displays external data from the U.S SPWC.
Utilized: Python (Flask), d3.js

REFERENCES

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Fondation Campus Biotech Geneva,
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