Timothée SANCHEZ

MSc. 2 Machine learning and Bio-informatics @ *Paris Saclay University - AgroParisTech*

CONTACT

timothee.sanchez@agroparistech.fr

+ 33 6 46 81 86 03

github.com/Tikings

Timothée Sanchez

PROFILE

I am passionate about bio-informatics and machine learning applied for biology and health.
I am currently looking for an end-of-study internship to develop my skills and pursue a PhD. in this field or in Computational Neurosciences.
I like teamwork as well as autonomy and to get involved in research projects.

LANGAGES

- **English :** Fluent
  - TOEIC 990 / 990
- **French :** Native

HOBBIES

- **Bouldering**
- **Graphic arts :** Photography, Drawing, 3D
- **Electronics** : DYI Projects

EDUCATION

- **MSc. 2 in Bio-informatics and Machine learning (IODAA - AMI2B) :** *Paris Saclay University - AgroParisTech :* Bio-informatics, Data-base management, graph theory, computer science applied to biology — 2024 - 2025
- **MSc 1 in Bio-engineering -** *Paris Saclay University - AgroParisTech* : Biology, environnement, Statistics for health — 2022 - 2023
- **BSc eq. in 1st year's *AgroParisTech* engineering program** : Biotechnology, agronomy, economics,... — 2021 - 2022

PROFESSIONAL EXPERIENCES

Research Internship (Oct. 2023 - Mar. 2024) - *Team Behaviour and neural circuits - NeuroPSI (Saclay)* ***"Studying dopaminergic neurons on Drosophila melanogaster larvae"***

Skills : Immunostaining, Confocal and two-photon microscropy, Behavioral experiments, Data analysis (Python, MATLAB)

Results : Comparison of LexA and Gal4 profiles of dopaminergic neurons in Drosophila larva (3 months), Better characterisation of the involvement of dopaminergic neurons on response to an aversive stimulus (2 months)

Research Internship (Jun. - Aug. 2023) - *Adaptative mechanisms and evolution National Natural History Museum (Brunoy)*

"Impact of emotions on the performances of working memory and exploration in the grey mouse lemur (Microcebus murinus) "

Skills : Performing cognitive experiments on animals, video analysis using professional software (Ethovision) and Data analysis (R. Software)

Results : Developpement of a pipeline to improve data analysis, showed the impact of emotions on exploration in M. murinus and suggested ways to improve the apparatus to characterise the impact on working memory

ATTACHMENT - SKILLS

IT / CODING

- **Python**
  Uses of : jupyter, pandas, numpy, pytorch, scikit-learn, matplotlib, seaborn
- **R / MATLAB**
  Data management, analysis and representation
- **Git / Bash**
- **PostGreSQL** :
  Data base optimisation and management
- **Docker / Nextflow** :
  Workflow development for biological applications

LABORATORY

- **Confocal and multi-photon microscopy** :
  Set-up of the hardware (Leica SP-8) and software (LasX)
  Performing recordings and images
- **Immonustaining** :
  Plan, perform and analyse the experiments
- **Vertebrate and invertebrate manipulation / dissection** :
  Microcebus murinus manipulation for behavioral experiments
  Dissections : mice, drosophila larva, fish.
  Drosophila breeding and genetic understanding of the tools used in this model

SOFTWARE

- **Communication :**
  - LaTex
  - Pack Office (Word, Excel, Powerpoint)
- **Image analysis and modification :**
  - Image J (Fiji)
  - Affinity Designer / Procreate
  - Blender