

Alix TIRAN-CAPPELLO

Data Scientist

After 8 years in neuroscience research, I ambition to provide solutions for data analysis with a particular focus on deep learning and machine learning applications.

Diplômes

PhD in neurosciences - *Aix-Marseille Université* 2018

Institut de Neurosciences de la Timone

Master in biology - *École Normale Supérieure de Lyon.* 2013

Majors: neurobiology, cell biology, complex systems. **With honors**

Bachelor degree in biology - *École Normale Supérieure de Lyon.* 2011

Majors: cell biology, genetics.

Professional experience

Postdoctoral Research fellow - *Northwestern University* 2019 – 2020

Physiology of Substantia Nigra in Huntington's Disease

Chicago,
USA

- Implementation of new statistical detection for data analysis with R
- Patch-clamp and in-vitro physiology experiments in multiple configurations
- Familiarization with deep learning toolbox Keras in R
- Image processing: cellular imaging, immunohistochemistry, microscopy
- Short term research projects with quarterly reports

PhD student – *INT, Aix-Marseille Université* 2014 – 2018

Neurobiology of reward (sugar and cocaine) in rats

Marseille,
France

- Recordings of oscillatory brain activity, analysis in Matlab
- Optogenetic platform set-up, hardware purchase and scientific watch
- Statistical analysis with Matlab and Prism of behavioral data
- Offline video data analysis with Bonsai software
- Long term experiment planning with everyday presence (~4 months)
- University Teachings: General lectures, practical training

Internship in research laboratories 2010 – 2014

Abroad: *NIDA*, Baltimore, USA & *MPI Brain*, Frankfurt, Germany

In France: *CRICM* Paris, *CRNL* Lyon, *INT* Marseille.

Publications

Articles published in international peer-reviewed journals ([Full list](#)) :

- Degoulet et al., 2021, PNAS
- Pelloux et al., 2018, Molecular Psychiatry
- Koike et al., 2017, The Journal of Neurosciences
- McDevitt et al., 2014, Cell Reports
- Manuscripts under evaluation ([Link](#))

Skills

- **Data analysis:**
Neuronal activity, temporal series and behavioral data, semi-automated video analysis
- **Advanced certification in R**, from www.datacamp.com :
Data import & cleaning, Data manipulation, Data visualization, Statistics, Machine Learning fundamentals
- **Communication:**
More than 10 presentations during national and international meetings
- CNRS certifications:
Project design in rodent studies (**Grade: project manager**)
Surgeries in rodents
- Deep brain stimulation (DBS, optogenetics, with hardware interface set-up) and recording



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13005, Marseille, France

🚗 Driving licence

⌚ 31 years old

Languages

French: Mother tongue

English: Bilingual (CLES 2)

German: Average

Programming

Matlab

R

Computer skills

Keras, TensorFlow,

[Shiny](#),

Cloud and HPC computing,

Microsoft Office, Graphpad Prism,

Adobe Illustrator

Soft skills

Autonomy

Adaptation capabilities

Teamwork

Curiosity

Critical thinking

Interests

Aikido and martial arts

Rock climbing

Cinema