

# Thalita Drumond

PhD in computer science

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## Profile

Passionate about teaching and providing creative solutions to real problems, I am looking forward to opportunities in these domains.

## Skills

- AI**, machine learning and deep learning
- Data science**: data mining and data visualization

## SW development

- Python
- Scientific: Numpy, Scipy
- DataViz: Pandas, Matplotlib
- Machine learning: PyTorch, TensorFlow, Scikit-learn
- C/C++
- Matlab
- HDLs (VHDL, Verilog)
- Java, R, HTML/CSS, PostgreSQL

## Soft skills

- Problem-Solving
- Autonomy
- Curiosity
- Pragmatism
- Collaboration
- Attentive

## Languages

- French: fluent
- English: fluent   
 105/120 TOEFL iBT (2010)
- Portuguese: native

## Interests

- Performing arts: dancing, singing and musical theater
- DIY and handcrafts in general

## Experience

- Apr – Jul 2021 **Course instructor** EPISI Bordeaux and Toulouse  
116 h. Level M1, computer engineering degree, *alternance* option. Groups of ~20 students. Coursework charge:
  - Neural networks and deep learning: fundamentals.
  - Machine learning and deep learning: tools.
  - AI and cybersecurity: network monitoring. Responsible for full-course execution including design of course materials and assessments.
- Jan – Jun 2020 **Temporary professor (ATER)** Université de Bordeaux, France  
96h of teaching for computer science students (L1). Courses: Array algorithms, Intro to databases and web programming.
- Oct 2016 – Dec 2019 **PhD candidate researcher** INRIA Bordeaux Sud-ouest, France  
Study of **deep learning** models for image classification. Focus on small data learning and model interpretability. Advisors: Dr. Frederic Alexandre and Dr. Thierry Vieville.
  - SW development in Python.
  - Engaged in science outreach activities.
  - [gitlab.inria.fr/mnemosyne/data\\_prototypes](https://gitlab.inria.fr/mnemosyne/data_prototypes)
- 2017, 2018 **Teaching assistant** Université de Bordeaux, France
  - Lab sessions and exercises: Intro to algorithms and programming (40h), Intro to computer networks (20h).
  - Lectures on artificial neural networks and deep learning for Cognitive Science MSc.(3h, 6h)
- 2014–2016 **MSc candidate researcher** FAPESP scholarship, Unicamp, Brazil  
Scholarship by state agency FAPESP . Study, analysis and proposition of machine learning solutions using co-clustering: Advisor: Prof. Dr. Fernando J. Von Zuben.
  - Recommender systems with collaborative filtering.
  - Pattern mining on brain activity time series.
  - SW development in Python.
  - [unicamp-lbic/reclab](https://github.com/unicamp-lbic/reclab) [unicamp-lbic/ccc-biclustering](https://github.com/unicamp-lbic/ccc-biclustering)

## Education

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- 2016 – 2020 **PhD in computer science** Université de Bordeaux  
(4) Specialized in AI and particularly in **deep learning** models for **image classification**. Defended December 3rd, 2020.
  - 2014 – 2016 **MSc Electrical Eng. Computer eng.** Unicamp  
(3) Specialized in **artificial intelligence** and **machine learning**.
  - 2011 – 2013 **Diplôme d'ingénieur (M.Eng.)** Télécom Paristech, Paris, France  
(2) Specialized in embedded systems and SoC design.
  - 2008 – 2014 **BSc Electrical Engineering** Unicamp  
(1) Course paused for a 2-year double degree program at Télécom Paristech.

## Publications

- 2018 **Bio-inspired analysis of deep learning on not-so-big data using data-prototypes**  
*T. F. Drumond, F. Alexandre, T. Vieville.*  
Frontiers of Computational Neuroscience.
- 2017 **Using prototypes to improve convolutional networks interpretability**  
*T. F. Drumond, F. Alexandre, T. Vieville.*  
NIPS workshop on Transparent and interpretable Machine Learning in Safety Critical Environments.
- 2017 **Jouez avec les neurones de la machine**  
*T. F. Drumond, L. Viennot, T. Vieville, V. François*  
Popular science article at [lemonde.fr/blog/binaire](https://lemonde.fr/blog/binaire).