

# CLÉMENT ROMAC

(+33) 673411798 ◊ clement.romac@gmail.com ◊ Bordeaux, France

Age : 24 ◊ <https://clementromac.github.io/>

## CARRIER OBJECTIVE

---

I am interested in Deep Learning and Reinforcement Learning.

## EDUCATION

---

**University of Bordeaux, Bordeaux** *2019 - 2020*

MSc. in Computer Science

Algorithms and Models specialisation

**Ynov Informatique Ingésup, Bordeaux** *2014 - 2019*

Degree. in Computer Science engineering

Data Science specialisation

Rank : 1

**High School Les Iris, Lormont**

*2011 - 2014*

High School Degree, with the highest honours

Overall Notation : 17.75/20

## WORK EXPERIENCE

---

**Inria (FLOWERS team), Bordeaux**

*September 2020 - Current*

*Research Engineer*

- Working on an experimental platform to apply curiosity-driven algorithms in Complex Systems

**Inria (FLOWERS team), Bordeaux**

*March 2020 - August 2020*

*Research intern*

- Worked on TeachMyAgent, a benchmark platform for Automatic Curriculum Learning applied to Deep Reinforcement Learning algorithms :
  - Created procedurally generated Box2D environments and embodiments
  - Implemented state-of-the-art Automatic Curriculum Learning methods
  - Built a benchmark setup and benchmarked the methods
  - *Paper accepted at ICML 21'*
- Work environment :
  - Python : Tensorflow

**Weenove, Bordeaux**

*October 2017 - February 2020*

*Part time Data Scientist*

- In charge of the Machine Learning R&D :
  - Implemented an Automated Machine Learning service
  - Made this service available (Beta) in a Business Intelligence Software (Biwee)
  - Lead the Machine Learning R&D projects
  - Data Science projects
- Work environment :
  - Azure ML Services
  - Docker
  - Python : Pandas, Scikit-Learn, Keras, Jupyter
  - C#

**Scalian, Bordeaux***Summer 2017**Intern Data Scientist*

- Data Science projects :
  - Time Series Anomaly Detection
  - Barcode localization on drone pictures with Deep Learning
  - Data Exploration project
- Work environment :
  - Python : Pandas, Scikit-Learn, Flask, Tensorflow, Jupyter
  - C++ : Qt Creator

**Weenove, Bordeaux***June 2016 - May 2017**Part time Intern Data Scientist*

- Machine Learning R&D :
  - Implemented an Automated Machine Learning service
  - Made this service available (Beta) in a Business Intelligence Software (Biwee)

**Weenove, Bordeaux***Summer 2015**Intern Developer*

- C# development of a Business Intelligence Software (Biwee)
- Microsoft environment : Azure, Visual Studio, WCF, TFS
- Analysis of Open Data

---

**PROJECTS****Deep Recurrent Q-Learning vs Deep Q Learning on a simple Partially Observable Markov Decision Process with Minecraft (2019)**

With Vincent Béraud, we compared a Deep Recurrent Q-Network and a Deep Q-Network on simple missions in a Partially Observable Markov Decision Process in Minecraft. We wrote a paper that can be found [here](#) and our code can be found [in this repository](#).

**Gym TicTacToe (2018)**

Gym TicTacToe is a light Tic-Tac-Toe environment for OpenAI Gym. The code can be found [here](#).

**Deep Learning Playground (2018)**

Projects to put in practice what I have learned from the Deep Learning Book (Goodfellow, Bengio, Courville). In the last project, I tried to make a simplified version of the Google Neural Machine Translation with a Seq2Seq based on LSTM cells to translate from French to English.

**Deep Q-Learning TicTacToe (2017)**

During my third year at Ynov Informatique Ingésup, I used Deep Q-Learning to play Tic-Tac-Toe. The agent was first trained against an agent playing randomly, then against itself. The code can be found on [this repository](#).

---

**PUBLICATIONS****Partially Observable Markov Decision Process with Minecraft**

Romac et Béraud. 2019 (Preprint). [abs/1903.04311](#).

**Meta Automatic Curriculum Learning**

Rémy Portelas and Clément Romac and Katja Hofmann and Pierre-Yves Oudeyer. 2020 (Preprint). [abs/2011.08463](#).

**TeachMyAgent : a Benchmark for Automatic Curriculum Learning in Deep RL**

Clément Romac and Rémy Portelas and Katja Hofmann and Pierre-Yves Oudeyer. *Thirty-eighth International Conference on Machine Learning, ICML 2021*.

## SKILLS

---

<b>Data Science</b>	Machine Learning, Deep Learning, Reinforcement Learning
<b>Development</b>	Python (Tensorflow, Keras, Scikit-Learn), C#, C++, JavaScript
<b>Others</b>	DataBases (SQL, NoSQL), Linux, Docker

## LANGUAGES

---

<b>French</b>	Native speaker
<b>English</b>	Advanced (TOEIC : 980/990)

## TALKS

---

**Dataquittaine 2020, Bordeaux** *February 2020*  
*Automated Machine Learning with Biwee Prediction*  
A feedback on the results we obtained using our Automated Machine Learning product on real world cases with our clients. The video can be found [here](#).

**Machine Learning meetup, Bordeaux** *December 2019*  
*Automated Machine Learning*  
An overview of the field of Automated Machine Learning and then explained our work at Weenove and gave feedback from the results we obtained applying AutoML on the cases of our clients.

**Seminar at Pôle Emploi (Job Centre) Aquitaine** *April 2019*  
*An introduction to AI and its impacts*  
An introduction to AI and particularly Machine Learning and Deep Learning, an overview of its applications and its impacts on jobs.

**Les nuits des réseaux de neurones** *June 2018*  
*AI agent playing Minecraft*  
Applying Deep Recurrent Q-Learning to a Minecraft environment.

**Les nuits des réseaux de neurones** *March 2018*  
*AlphaGo Zero, Starting from scratch*  
A Deep Reinforcement Learning introduction and an intuition of AlphaGo Zero's conception.

## TEACHING

---

**Ynov Informatique Ingésup Bordeaux** *November 2018 - December 2018*  
*Machine Learning Major*  
*Third year students course for the Data Science Specialization*  
Taught 90 hours with Pierre Leroy to third year students. Everything can be found on the **Major's Website**.

## SERVICE AND LEADERSHIP

---

Co-founded and directed (until 2019) the AI working group of Ynov Informatique Ingésup Bordeaux  
— We gather every two weeks on Wednesday to share and work on AI projects.  
— Projects area : Reinforcement Learning, Chatbots, Kaggle

Co-founded and animated (until 2019) the meetup “Les nuits des réseaux de neurones”

— Talk and workshops on Neural Networks all night long.

— Held every month or two months, open to everyone (270 members).

— <https://www.meetup.com/fr-FR/Les-nuits-des-reseaux-de-neurones/>

Co-organizer of the meetup “Bordeaux Machine Learning Meetup”

— Talk and workshops once a month (+1400 members)

— <https://www.meetup.com/fr-FR/Bordeaux-Machine-Learning-Meetup/>

## HOBBIES

---

Sport : I have been playing football since I am 6 years old. I love sport more generally.

Music : I play bass guitar in a band.