

# CLÉMENT ROMAC

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Age : 22 ◇ <https://clementromac.github.io/>

## CARRIER OBJECTIVE

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I am interested in Deep Reinforcement Learning.

## EDUCATION

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**Ynov Informatique Ingésup, Bordeaux**

*2014 - Current*

MSc in Computer Science

Data Science specialization

**High School Les Iris, Lormont**

*2011 - 2014*

High School Degree, with honours

Overall Notation : 18.75/20

## MOOCS AND BOOKS

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**Ecole Polytechnique Fédérale de Lausanne, EdX**

*2018*

Linear Algebra MOOC

Certificates : Part 1 - Part 2 - Part 3

**Stanford University, Coursera**

*2016*

Machine Learning

Certificate : Certificate

**Deep Learning Book**

*2018*

Goodfellow, Bengio, Courville

## WORK EXPERIENCE

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**Weenove, Bordeaux**

*October 2017 - Current*

*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 Data Scientist*

- Machine Learning R&D :
  - Implemented an Automated Machine Learning service
  - Made this service available (Beta) in a Business Intelligence Software (Biwee)
- Work environment :
  - Azure ML Studio
  - Python : Pandas, Scikit-Learn
  - R
  - C#

### **Weenove, Bordeaux**

*Summer 2015*

*Intern Developper*

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

## **PROJECTS**

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### **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](#).

## **SKILLS**

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<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

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**French** Native speaker  
**English** Advanced (TOIEC : 980/990)

## TALKS

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**Les nuits des réseaux de neurones** *June 2018*  
*AI agent playing Minecraft*

For the fifth session of “Les nuits des réseaux de neurones”, wich was held at La Piscine Bordeaux, Vincent Béraud and I made a talk about a project we had been working on for several month : Applying Deep Recurrent Q-Learning to a Minecraft environment.

**Les nuits des réseaux de neurones** *March 2018*  
*AlphaGo Zero, Starting from scratch*

For the third session of “Les nuits des réseaux de neurones”, Vincent Béraud, Pierre Leroy and I made a talk about AlphaGo Zero. We introduced concepts such as Markov Decision Process, Reinforcement Learning, Q-Learning, Monte Carlo Tree Search or Residual Neural Networks. The goal was to give an intuition to the way AlphaGo Zero worked.

**Global Azure Bootcamp Bordeaux** *April 2017*  
*Machine Learning through AzureML*

For the Global Azure Bootcamp 2017, the annual event organized by Microsoft, the organizers of the event in Bordeaux asked Pierre Leroy and I to do a talk about Machine Learning.

## TEACHING

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**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 (mostly from computer science). Everything can be found on the Major’s Website.

## SERVICE AND LEADERSHIP

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Co-founded and directing the AI working group of Ingésup Bordeaux

Co-founded and animating the meetup “Les nuits des réseaux de neurones”

## HOBBIES

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Sport : I have been playing football since I am 6 years old

Music : I play bass guitar in a jazz fusion band