## CLÉMENT ROMAC

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#### CARRIER OBJECTIVE

I am interested in Deep Reinforcement Learning.

#### **EDUCATION**

## 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

## 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

## 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

Intern Data Scientist

- · Data Science projects:
  - Time Series Anomaly Detection
  - Barcode localization on drone pictures with Deep Learning

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Summer 2017

- 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)
- · Work environment:
  - Azure ML Studio
  - Python: Pandas, Scikit-Learn
  - R
  - C#

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**

#### **Preprints**

Romac et Béraud.

2019. Deep Recurrent Q-Learning vs Deep Q Learning on a simple Partially Observable Markov Decision Process with Minecraft. abs/1903.04311.

#### **SKILLS**

Data Science Machine Learning, Deep Learning, Reinforcement Learning Development Python (Tensorflow, Keras, Scikit-Learn), C#, C++, JavaScript

Others DataBases (SQL, NoSQL), Linux, Docker

#### **LANGUAGES**

French Native speaker

English Advanced (TOIEC: 980/990)

#### **TALKS**

## 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 conception.

## Global Azure Bootcamp Bordeaux

April 2017

Machine Learning through AzureML

An introduction to Machine Learning and how it can be used with Azure Machine Learning.

#### **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 directing 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 animating 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/

#### **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 jazz fusion band.