## CLÉMENT ROMAC

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#### CARRIER OBJECTIVE

I am interested in Deep Reinforcement Learning.

## **EDUCATION**

## University of Bordeaux, Bordeaux

2019 - Current

MSc in Computer Science

Algorithms and Models specialisation

## Ynov Informatique Ingésup, Bordeaux

2014 - 2019

MSc in Computer Science Data Science specialisation

#### High School Les Iris, Lormont

2011 - 2014

High School Degree, with the highest honours

#### MOOCS AND BOOKS

#### Ecole Polytechnique Fédérale de Lausanne, EdX

2018

Linear Algebra MOOC

Certificates : Part 1 - Part 2 - Part 3

Overall Notation: 69.67%

Overall Notation: 17.75/20

#### Stanford University, Coursera

2016

Machine Learning

 $\begin{array}{c} Certificate: Certificate \\ Overall\ Notation: 95.30\% \end{array}$ 

## 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 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)
- · 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 ScienceMachine Learning, Deep Learning, Reinforcement LearningDevelopmentPython (Tensorflow, Keras, Scikit-Learn), C#, C++, JavaScript

Others DataBases (SQL, NoSQL), Linux, Docker

#### **LANGUAGES**

French Native speaker

English Advanced (TOEIC: 980/990)

#### **TALKS**

## Dataquitaine 2020, Bordeaux

February 2020

Automated Machine Learning with Biwee Prediction

A feedback on the results we had in 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 had in 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 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.