

EL MQIRMI PIERRE

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CARRIER OBJECTIVE

I am mainly interested in Optimisation and Artificial Intelligence. My objective is to develop my skills and knowledge in these domains while working on challenging problems.

EDUCATION

Imperial College London, United Kingdom *September 2019 - September 2020*
MSc Advanced Computing With Distinction

Department of Computing
Artificial Intelligence - Software Engineering - Computer Security

University of Montreal, Canada *September 2015 - August 2018*
BSc Computing Overall GPA: 3.66

Department of Computing and Operation Research

HEC Montreal, Canada *Autumn 2017, Winter 2018*
Courses: Management, Finance, Entrepreneurship

WORK EXPERIENCE

Giro Inc., Canada March 2021 -
Analyst Programmer / AI Developer

- Artificial Intelligence Team.
- R&D - Machine learning & Optimisation
- My role is to propose innovative solutions in AI and to implement these in our software.
- I led and still lead several AI projects at Giro such as travel time prediction, anomaly detection and reinforcement learning implementation as an heuristic inside an optimisation algorithm.

Open Studio, France January 2019 - July 2019
Web Developer

- The technologies used were HTML, CSS, JS, PHP, VueJS, SQL. I had the opportunity to work as part of a team but also independently on some projects that were given to me.
- Temporary employment in order to finance my MSc degree at Imperial College.

Freelance, France - Canada May 2017 - August 2019
Web development, back-end / front-end , mobile applications.

Giro Inc., Canada May 2018 - August 2018
Programmer Analyst - Internship

- Development and implementation of data structure for optimization algorithm in C++.
- Translation of a minimal cost matching algorithm from Fortran to C++.
- Organic and functional analyses.

TECHNICAL SKILLS

Languages	Python, C++, PHP, SQL, JavaScript, HTML, CSS
Tools & Frameworks	GIT, CPLEX, PRISM, PyTorch, Laravel, Sklearn, gRPC, Protocol buffers
Artificial Intelligence	Reinforcement Learning, Machine Learning & Deep Learning (MLP, CNN, RNN)
Operating Systems	Windows, MacOS, Linux

SOFT SKILLS

Adaptability	Mobility, and ability to adapt to a new environment quickly.
Team-spirit & Leadership	I enjoy working as part of a team and to propose new ideas.
Quick Learner	Ability to learn new technologies quickly.
Languages	French, English

PROJECTS

MSc Project - Building Abstract Representations to Check Multi-Agent Deep Reinforcement-Learning Behaviors. 2020

The aim of this project is to extend the work presented in the paper **Assurance in Reinforcement Learning Using Quantitative Verification**. from Abstract Markov Decision Process to Abstract Markov Games (i.e from single agent reinforcement learning to multiple agent reinforcement learning). Thus, it consists to build a framework to automatically generate Abstract Markov Games (AMG) specifically aiming for Deep Reinforcement Learning (DRL) scenarios and to evaluate model checking techniques over the generated AMG to check DRL policies on given specifications.

Research paper based on my project published at the 20th International Conference on Autonomous Agents and Multiagent Systems (AAMAS21): <http://www.ifaamas.org/Proceedings/aamas2021/pdfs/p474.pdf>

Sentence-level Quality Estimation - NLP 2020

Regression model to predict the quality of a machine translated sentence.

Report available: <https://pierreelmqirmi.com/pdf/NLP.pdf>

GitHub: <https://github.com/PierreElm/NLP-QualityMT>

Predicting brain age using Magnetic Resonance Imaging (MRI) data. 2020

Report available: <https://github.com/PierreElm/AgeRegressionBrainMRI/blob/master/report.pdf>

GitHub: <https://github.com/PierreElm/AgeRegressionBrainMRI>

Kernel 2020

During two months, I have supervised Martin El Mqirmi (First-year computing student at the University of Montreal) during the development of the alpha version website of a start-up (Kernel). The website has been developed with the Framework Laravel. The main technologies used for this website are Php, SQL, JS, CSS, and HTML.

My role in this project was to lead Martin through the development of the website and teach him how to use a Php framework (Laravel). I also implemented the database for this project.

<https://www.kerneling.com/>

Online Marketplace 2019

This project is still in progress, but the website is functional. It was born from a collaboration with another student who I worked with during courses at the University of Montreal. The purpose of this website is to offer a sneakers market place for limited edition.

Laravel is the framework used in this project, we are also using Stripe and PayPal API for payments.

<https://www.middleman.paris/>

Cogiv Website 2019

Website for an association. The framework used in this project is Laravel.

Administration panel available for managing content and registrations to their events.

<https://cogiv.org/>

BeDesign Website

2018

Development of a company website with custom design, administrator panel for managing content and layout. Reserved area for customers.

Kohana is the framework used for this project.

<https://bedesignfrance.com/>

ACADEMIC ACHIEVEMENTS

Academic Excellence Scholarship (2 000\$) from the department of Computer Science and Operational research. *(2016-2017)*

Deans honour (mention of excellence) from the Faculty of Arts and Science - University Of Montreal. *(Winter and Summer 2018)*

LEADERSHIP AND VOLUNTEERING

Computer Science and Operations Research sports manager at the University of Montreal. *(From September 2016 to January 2018)*

HOBBIES

Sport

Mainly Soccer and Ski.

Travels

I always enjoy discovering new cultures and getting out of my daily routine by travelling.

Video Games