

Romain Ducrocq

Graduate student in software engineering, intelligent systems and management

Paris, France

Email : romain.ducrocq@pm.me

[\[GitHub\]](#) [\[LinkedIn\]](#)

EDUCATION

- 2022** **Master's Degree in Management - Grande Ecole Program**
EM Lyon Business School, France [\[Grades\]](#) (expected in october 2022)
- 2021** **Master's Degree in Computer Science - Intelligent Systems and Applications**
Gustave Eiffel University, France [\[Degree\]](#) [\[Grades\]](#) (with Highest Honors)
- 2019** **Master's Degree in Software Engineering - IoT, Networks and Services**
ECE Paris Engineering School, France [\[Degree\]](#)

EXPERIENCE

- 2021** **IFSTTAR - GRETTIA laboratory**, AI / ML Research Internship – 6 months
"Deep Reinforcement Q-Learning for Intelligent Traffic Signal Control with Partial Detection".
Reinforcement Learning and Optimal Control Systems for Civil Engineering :
 - Modeling a new MDP for partially observed intersections in mixed traffic states.
 - Implementation of multiple DQN algorithms in Python 3, with Pytorch and Gym.
 - Numerical evaluation in the SUMO simulator against performance benchmarks.
 - Key results summarized in a research paper, written in Latex. [\[Article\]](#) [\[Code\]](#)
- 2019** **Sowee EDF Group**, Software and IoT Engineering Internship – 6 months
 - Software development on the IoT multi-source solution of a Smart Home Hub.
 - Implementation of Java applications for the MicroEJ SDK embedded platform.
 - Conception of modular firmware design, with involvement in the Ui/Ux phases.
- 2018** **The Explorers Foundation**, Web Development Internship – 4 months
 - Implementation of web-services in C# and JS within the .NET framework.
 - Continuous integration in the dashboard of an online multimedia platform.

KEY SKILLS

Software :

GNU/Linux · Debian · Bash

Python · R · Matlab/Octave

C · C++ · C# · Java · JS

Data & ML :

Pandas · Pytorch · Keras · Gym

Classification · Clustering

DNN · CNN · DQN · Graphs

LANGUAGES

French : Native (level C2)

English : Advanced (level C1)

German : Intermediate (level B2)

CERTIFICATES

- **TOEIC : 985 / 990**, Listening & Reading, ETS Global [\[Certificate\]](#)
- **Deep Learning Specialization**, Coursera, deeplearning.ai [\[Certificate\]](#)
- **Machine Learning**, Coursera, Stanford University Online [\[Certificate\]](#)

VOLUNTEERING

- 2021** **Computer Science Teacher**, Konexio, UGE, ENPC
 - Courses : Web Development, Reinforcement Learning.
 - In professional training, University and Graduate School.
- 2019** **Pro Bono Volunteer**, Pro Bono Lab, Cie. Esprits Bariolés
 - Organization of skills sponsorship days for associations.

OTHER ACTIVITIES

Sport

- **Fitness** : Weightlifting, HIIT
- **Running** : Marathon, Trail
- **Trekking** : Alps, Pyrenees
- Gymnastics, Climbing, Biking

Travel

- **Exchange semester** : Ajou Univ., Suwon, South Korea
- **Solo traveling** : Myanmar, Japan, Lithuania, Iceland