

Auguste Lehuger

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Education

Imperial College London

2019 – 2020

MSc in Computing : Artificial Intelligence and Machine Learning

Reinforcement Learning, Computer Vision, Mathematics for Machine Learning, Privacy Engineering, Natural Language Processing, Distributed Ledgers

École Polytechnique

2016 – 2019

One of France's top ranking schools for science and engineering

MSc in Applied Mathematics and Computer Science.

Statistics, Probability, Complex Analysis, Differential Calculus, Random Models, Advanced algorithmic

Paris Sciences & Lettres (PSL)

2013 – 2016

Best ranked University in France according to Times Higher Education 2020.

Bachelor of Sciences, majoring in Mathematics, awarded with highest honours.

Academic Projects

Deep Reinforcement Learning in Maze Environment

Nov 2019

Reinforcement learning project in Python.

- Designed a learning agent based on a deep Q learning framework.
- Implemented extensions: *target network*, *prioritised replay* and custom network visualisations

Neural based agent in complete information board games

Feb 2019

Reinforcement learning project in Python.

- Designing a learning environment modelling any zero sum game with complete information.
- Agent learning based on Convolutional Neural Network trained with Monte Carlo Tree Search.

Harmonic Coordinates for Character Articulation

Nov 2018

Digital representation project in Java

- Creation of 3D mesh objects; Scan Conversion of continuous 3D object in voxels.
- Animation of a cage-controlled character by interpolating the deformation with Laplace equation

Internship experience

EOS Imaging

Apr – Sep 2019

Machine learning research intern, *Montreal*

- Researched algorithms to automatically generate 3D meshes from biplanar radio of vertebrae
- Developed a CNN and a Statistical Shape Model to adjust vertebrae on size, shape and orientation.

Ippon Technologies USA

Jun – Sep 2018

Web development Intern, *Richmond (Virginia)*

- Developed a microservice architecture website with *Angular* & *Spring* technologies.
- Hosted on cloud and interconnect with an Alexa App with *Jenkins* and *Amazon Web Service*

Passerelles Numériques Cambodia

Oct 16 – Apr 17

Math & Logic Trainer, *Phnom Penh*

- Designed a curriculum: 'Math for Web Programming' for a professional training in web development
- Taught the curriculum to two classes of 25 young khmer adults

Skills

- **Programming:** Python (TensorFlow, PyTorch, Pandas), Java, JavaScript, HTML, CSS, C++
- **Languages:** French (native), English (fluent), Spanish (limited working proficiency)

Outside activities

Associative :

- Former Cellar Master of École Polytechnique, participating in nationwide oenology competition
- Founder of *X Botanical Garden*: led the construction of a 300 m² pavilion for Vertical Farming

(30k€, 150 pax)

Sport :

- Cycling, mean of transport
- Competed in Tennis & Handball for 6 years each.
- Currently practicing my swimming skills, three times a week.
- Ecole Polytechnique Volleyball team : competed at French university championship.

Board & Card Games:

- Diligent Player of The Resistance: hardened resistant, I am still working on my spy persona.
- Poker Player: competed in nationwide tournaments.