MALHOU Mohamed

Email : mohamed.malhou@polytechnique.edu
Mobile : (+33)753719528
Address : 11 Bd des Maréchaux, 91128 PALAISEAU, France
Github: https://github.com/mohamedmlh
Portfolio Website: https://mohamedmlh.github.io/portfolio/

EDUCATION

Ecole Polytechnique, France *August 2018 - Ongoing*
Ingénieur Polytechnicien Program
Coursework includes: Statistics, Deep Learning in Computer Vision,
Algorithms for data analysis in C++, Data Analysis and Unsupervised Learning
Monte-Carlo Methods and Stochastic Processes, Operations Research
Optimisation and Control.

Lycée d'Excellence de Benguerir (LYDEX), Morocco. *September 2016 - June 2018*
Preparatory Program.
A two-year post secondary program in advanced mathematics and physics.

WORKING EXPERIENCE

Machine Learning Engineer. *September 2020 - Ongoing*
AUK Technology, London
Part-timer

Software Developer and Machine Learning Intern. *June 2020 - September 2020*
AUK Technology, London
Developed APIs and brokerage software in .NET Core framework for finance business.
Used statistical and machine learning tools to create a strong natural language understanding pipeline
and built a State pattern based bot. Familiar with Agile Scrum methodology.

XProjets & Lidl, Paris *January 2020 - march 2020*
Worked in the school's junior Entreprise to build a computer vision model for Lidl.
Tracking the products in the shelves to better manage supermarkets using image segmentation models.

Teacher and specialized educator. *October 2018 - April 2019*
Apprentis d'Auteuil Foundation, Thiais.
Math teacher, robotics workshop supervisor and specialized instructor for 50 underprivileged students
with special needs. Helped two students on professional project reorientation.

PROJECTS

AirBus Ship Detection Challenge - Kaggle. *April 2020*

Developed a U-Net model with ResNet blocks in PyTorch to detect ships in satellite images.

Knapsack Problem: User scheduling over multiple channels *December 2019 - February 2020*

Explored different approaches of solving integer (and non integer) linear programs from greedy algorithms to dynamic programming and stochastic approaches. Project code and report on Github.

Self-tallying e-voting protocol implementation. *September 2019 - April 2020*

Collaborated with a group of PhD students of Edinburgh University to implement a decentralized protocol of electronic voting on Ethereum.

We implemented some cryptography primitives such as Zero knowledge signatures.

Detection of disaster areas on satellite images Hackathon. *September 28th 2019*

Worked in team and won the hackathon.

Applied deep learning and trained the model which is a convolutional network with the xBD dataSet.

TECHNICAL STRENGTHS

Programming	CSharp, Python. C++, Java, .NET Core, Entity Framework Core, Computer Vision, Natural Language Understanding, Domain-Driven-Design
Languages	English (*full proficiency*), Arabic (*native*), French (*native*), German (*B1*).

OUTSIDE ACTIVITIES.

Soccer (Member of Ecole Polytechnique soccer team).

Hiking and geocaching.