

Strongly interested in Computer Vision, I would like to make available and develop my skills in a related field early October.

## EXPERIENCE

Sept. 2021 Avril 2021 (6 months)	<p><b>Center for Mathematical Morphology (Mines ParisTech – PSL University)</b> – Artificial Intelligence Simulation <i>Research Intern, under supervision of Drokladal Petr and Willot François.</i></p> <p>Soil-Mixing materials 3D modelisation and simulation from 2D Images by Artificial Intelligence. The study is coordinated by the Gustave Eiffel University LATTS laboratory (Le Kouby Alain) for the DREAL.</p> <p>For the evaluation of the mechanical properties of dykes in the Loire River, it is desired to model the materials present in the cement inclusions resulting from the Soil-Mixing process. The challenge is to produce a 3D model from photos of the outer mantle of cores. <b>Notions : T-Net, Variational Auto Encoder, Generative Adversarial Network, Data Augmentation, Spectral Decomposition of a form, Small Dataset, Descriptive Latent Space.</b></p>
Sept. 2020 Mai 2020 (4 months)	<p><b>Lamsade Laboratory (Paris Dauphine – PSL University)</b> - Machine Intelligence and Learning Systems (Miles) <i>Research Assistant, under supervision of Negrevergne Benjamin and Yger Florian.</i></p> <p>Extension work on RASTA (Recognizing Artistic Style Automatically) <a href="#">[ref]</a>, a deep neural network for the identification of artistic movement directly from the image of an artwork.</p> <p>New state-of-the-art architectures were used to increase the classification accuracy. We improved the classification accuracy with a Wide Residual Network and Multiple Crop on the artwork as inputs (from 64% to 68%) . Applying Layer-Wise Relevance Propagation method, we put in the light the artwork parts responsible of a certain identification. The relevance of the method was evaluated by hiding parts of the artwork and analyzing the confidence in the identifications.</p>
Sept. 2019 Juin 2019 (4 months)	<p><b>EDF Commerce</b> - Gas Forecasting Service <i>Data Scientist, Forecaster</i></p> <p>Daily gas consumption forecast for private and professional customers by relying on R&amp;D models. Development of an application to visualise the seasonal break in consumption by means of predictive regressions to assist gas consumption forecasting. Ad hoc queries: Data Science studies.</p>
Sept. 2018 Oct. 2016 (2 years)	<p><b>GMF Assurances (Covéa Group)</b> - Network Direction, Sales Monitoring <i>Data Analyst, Developer – Apprenticeship (DUT STID and Bsc MIAGE)</i></p> <p>Development of monthly Human Resources monitoring for management control, a planning tool for project management. Approval of sterling indicators and studies on the commercial results of insurance products. Ad hoc queries: Development of follow-up for sales management and analysis, data extraction, process automation.</p>

## PROJECT

### Part of the coursework Data Science Project (Msc 2 Artificial Intelligence, Systems and Data)

- Learning Representations with One Shot Learning approach. Using a Neural Network with Contrastive Loss and Triplet Loss, we classified unseen classes from MNIST and Fashion-MNIST datasets. Exploration of latent space on WikiArts dataset with style base queries.
- Training Robust Neural Network with Adversarial Attack and Defense. Using a relatively small Neural Network we implemented PGD and FGSM attacks and applied them on CIFAR-10 dataset. By re-training the NN with attacked inputs, we increased its robustness to attacks of this kind.

## EDUCATION

### PSL University ( Paris Dauphine University | École Normale Supérieure | Mines ParisTech )

2020 - 2021	<p>Msc 2 Artificial Intelligence, Systems and Data <a href="#">[website]</a></p> <ul style="list-style-type: none"> <li><b>Relevant coursework (research oriented) :</b> Machine Learning   Deep Learning (Image Analysis)   Convex Optimization   Point Cloud and 3D Modelisation   Reinforcement Learning   Big Data   Ethics and AI</li> </ul>
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### Paris Dauphine University

2019 - 2020	<p>Msc 1 Computer and Data Science <a href="#">[website]</a></p> <ul style="list-style-type: none"> <li><b>Relevant coursework (research oriented) :</b> Mathematics for Data Science   Graph Theory   Game Theory   Algorithm and Programming   Database Management System</li> </ul>
2018 - 2019	Msc 1 Business Intelligence
2017 - 2018	Bsc Computer Science Applied to Business Management (MIAGE) in apprenticeship

### Paris Descartes UIT

2015 - 2017	DUT Statistics and Business Intelligence (STID) in apprenticeship
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## OTHER

Python : Sklearn | Pytorch | Keras | Tensorflow  
R | SQL | Command line evnt. | Excel VBA

Strongly interested in Deep Learning for Image Analysis, I would like to make available and develop my skills in a related field.