

Hugo Le Moine

DATA SCIENCE · PYTHON PROGRAMMING

☎ +33 6 35 26 40 40 | ✉ hugo.le-moine@outlook.fr | 🏠 hugolmn.github.io | 📱 hugolmn | 🌐 hugo-le-moine

Work Experience

Airbus Commercial Aircraft — Acoustics Department

Toulouse, France

MACHINE LEARNING APPRENTICE ENGINEER

Sep. 2018 — present

- **Anomaly Detection** : designing of a solution to automatize cleaning of audio recordings in a cost-effective way, using machine learning (DBSCAN, IsolationForest) to detect anomalous noise
- **Data Analysis** : identification contributors to specific aircraft noise variability; investigation of production quality drifts
- **Predictive Maintenance** : literature review and experimentation using autoencoders to anticipate component failure based on vibrations

[All the above projects were carried out in autonomy]

Projects

SNCF — French National Railway Company

Paris, France

EXPERIMENTAL TEAM PROJECT, SUPERVISED BY SNCF RESEARCHERS

Feb. 2020 — June 2020

- **Dynamic Programming** : optimizing economic performance of a train by searching the most efficient design of operation while reducing energy consumption with a delay constraint

Skills

Python	pandas, scikit-learn, keras, numpy, scipy, dask, librosa, matplotlib, seaborn, plotly
Programming	SQL, C/C++, R, Prolog, LaTeX, HTML, CSS, Jekyll, Lisp, PHP, x64 Assembly,
Database	MySQL, PostgreSQL, MondoDB, Oracle, neo4j
DevOps	Linux, Git, Docker
Languages	French (native), English (C1), Spanish (B2), Chinese (HSK1), Latvian (A1)

Education

University of Technology of Compiègne

Compiègne, France

5-YEAR COMPUTER SCIENCE AND ENGINEERING DEGREE (EQUIV. MSc) — CGPA: **4.96/5.00**

Sep 2015 — expected Aug 2021

- **Computer Science** — algorithms & data structures, formal language theory, complexity, object-oriented & logic programming
- **Information Technology** — network architecture, database design and query
- **Operations Research** — routing (TSP, VRP), optimization (LP, CP, DP), logistics, Monte Carlo
- **Mathematics & Statistics** — calculus, linear algebra, probability, estimators, hypothesis testing, confidence interval
- **Physics** — acoustics, sensors, signal processing, structure and properties of materials, chemistry (organic, mineral)

Riga Technical University

Riga, Latvia

EXCHANGE STUDENT

Aug 2017 — Jan 2018

- **Artificial Intelligence** : graphs and tree search algorithms
- **Programming** : object-oriented & assembly
- **Business Analytics & Project Management** — agile methods, planning, risk analysis, budgeting

Online Courses

Coursera

SELF-DIRECTED LEARNING

since 2017

- **Stanford (Andrew Ng)** — Machine Learning
- **deeplearning.ai** — Neural Networks & Deep Learning, Improving Deep Neural Networks
- **University of Michigan** — Python Data Structures, Applied Plotting, Charting & Data Representation in Python, Applied Machine Learning in Python

Extracurricular Activity

Since 2018	Attendee , DataVenture — <i>Data Science student organization</i>
Since 2018	Training Manager & Photographer , Pics'art — <i>photography skills development organization</i>
2018 — 2019	Local Representative, Head Communication , ESN Compiègne — <i>international student organization</i>
2016 — 2017	President , La Foulée UTCéenne — <i>running club</i>
2015 — 2017	Volunteer Rescue Worker , La Croix Blanche — <i>first-aid organization</i>