



# Hugo Le Moine

DATA SCIENCE · PYTHON PROGRAMMING

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*Soon to graduate data scientist apprentice with 2+ years of experience in leading data analysis and applying machine learning methods to industrial and technological challenges. Looking to secure a data scientist position starting September 2021.*

## Work Experience

### Airbus Commercial Aircraft — Acoustics Department

DATA SCIENTIST APPRENTICE

*Toulouse, France*

*Sep. 2018 — (Aug. 2021)*

- **Anomaly detection** in flight recordings and automatization of the cleaning: costs and time slashed by >90%.
- **Data analysis**: trend monitoring of production quality and root cause analysis of identified drifts ; identification of contributors to specific aircraft noise variability.
- **Clustering** of flight trajectories from high-dimensional data, to generate noise maps and ease simulation.
- **Optimization** of blade design: improved noise level while preserving efficiency, using genetic algorithms and surrogate modeling (deep learning).

## Projects

### University of Waterloo — Ubiquitous Health Technology Lab

RESEARCH PROJECT IN COOPERATION WITH UTC

*Waterloo, Canada*

*Sep. 2020 — Jan. 2021*

- Analysed and cleaned motion data from 100 000+ smart thermostats (>600GB of data).
- Prediction of the number of occupants in homes to study the impact of the confinement on habits.

### SNCF — French National Railway Company

EXPERIMENTAL TEAM PROJECT, SUPERVISED BY SNCF RESEARCHERS

*Paris, France*

*Feb. 2020 — June 2020*

- Optimized the economic performance of a high-speed train by searching the most efficient design of operation.
- Reduced energy consumption and respected a constraint of delay, using dynamic programming.

## Skills

<b>Python</b>	Data processing (pandas, numpy, pyspark, dask) · Data visualization (matplotlib, seaborn, plotly)
<b>Programming</b>	Machine learning (scikit-learn, keras, XGBoost) · Optimization (scipy, pymoo)
<b>DevOps</b>	SQL, C/C++, Prolog, HTML/CSS, (basics: R, PHP, Lisp, x64 Assembly)
	Linux, Git, Docker, Azure, Anaconda

## Languages

French (native) · English (C1 - TOEIC 985/990) · Spanish (B2) · Chinese (HSK3) · Latvian (A1)

## Education

### University of Technology of Compiègne (UTC)

5-YEAR COMPUTER SCIENCE AND ENGINEERING DEGREE (EQUIV. MSc) — GPA: **4.49/5.00**

*Compiègne, France*

*Sep. 2015 — expected Aug. 2021*

- Computer Science — algorithms, data structures, programming (object-oriented, logic)
- Information Technology — networks, cloud, databases
- Operations Research — optimization, routing, logistics
- Mathematics & Statistics
- Economics, competitive intelligence, business strategy

### Riga Technical University

6-MONTH EXCHANGE PROGRAM

*Riga, Lettonie*

*Août 2017 — Jan 2018*

- Courses taught in English — Artificial Intelligence, programming, business analytics, IT project management

## Extracurricular Activity

Since 2018 **Training Manager & Photographer**, Pics'art — *photography skills development organization*  
2018 — 2019 **Local Representative, Head of Communication**, Erasmus Student Network Compiègne  
2016 — 2017 **President**, La Foulée UTCéenne — *running club*  
2015 — 2017 **Volunteer Rescue Worker**, La Croix Blanche — *first-aid organization*