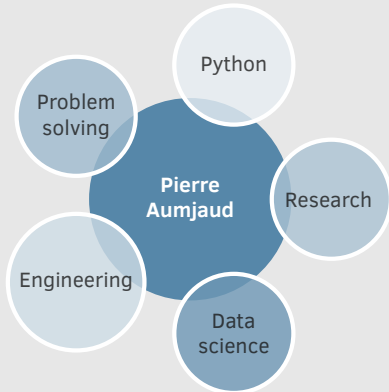# Pierre Aumjaud

## Machine Learing Researcher

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- +XX XXX XX XX XX
- www.pierreaumjaud.com
- @ xxxxxxxxxxxxxxxx
- French

## Profile overview ——



## Computer Skills ——

» **Programming Languages**

Python (8 years) • Matlab • C/C++

» **Frameworks & Libraries**

Numpy • Scikit-learn • Pytorch • Pandas • Jupyter • Gym • Jupyter • Matplotlib • ROS

» **Software Development**

Git • Pytest • Travis CI • Docker • Anaconda

» **Web Development**

HTML/CSS • PHP/SQL • Wordpress • Jekyll

» **Other**

Linux/Bash • Arduino • Markdown • LaTeX

## Languages ——————

- 🇫🇷 French ● ● ● ● ● ●
- 🇬🇧 English ● ● ● ● ● ○
- 🇪🇸 Spanish ● ● ● ● ● ○

## Social Network ——

- linkedin.com/in/pierreaumjaud
- github.com/PierreExeter

## About me

As an engineer passionate about **programming**, I thrive on using computers to find non-intuitive solutions to technical problems. During the last 8 years, I have been developing **machine learning** software to solve engineering problems. In particular, I applied **evolutionary algorithms**, **anomaly detection** approaches and **reinforcement learning** to material engineering, manufacturing and robotics problems.

## Work Experience

**2017 – 2021**   **Marie Curie Research Fellow**    University College Dublin, Ireland
Anomaly detection and condition monitoring of a manufacturing process using time series and machine learning. Robotic trajectory planning using a reinforcement learning approach.
**Focus:** *machine learning, reinforcement learning, time series, anomaly detection, robotics.*

**2016 – 2017**   **Postdoctoral Research Fellow**    University College Dublin, Ireland
Numerical modelling and evolutionary and topology optimisation of composite materials.
**Focus:** *evolutionary optimisation, topology optimisation, finite element analysis, composite materials.*

## Education

### Academia

**2012 – 2016**   **PhD Mechanical Engineering**    University of Exeter, UK
Numerical modelling and computational optimisation of vibrating aerospace structures.
**Focus:** *evolutionary optimisation, exploratory data analysis, data visualisation, Python, numerical analysis.*

**2009 – 2012**   **MEng Mechanical Engineering**    ENSMM, France
National graduate engineering school in mechanics and microtechnologies.
**Modules:** *mechanical engineering, computer science, engineering mathematics, electronics.*

### Online Courses

**2020**   **Practical reinforcement learning**    Coursera
**Focus:** *model-free reinforcement learning, policy-based methods.*

**2020**   **Machine learning**    Coursera
**Focus:** *supervised learning (regression and classification), neural networks, anomaly detection, unsupervised learning, dimensionality reduction, regularisation.*

**2019**   **Introduction to data analysis**    Udacity
**Focus:** *exploratory data analysis, data wrangling, data visualisation, Pandas, Scikit-learn.*

## Projects portfolio

**2022**   **Blogging about machine learning applications**
*www.datasparked.com*

**2021**   **Reproducible reinforcement learning experiments for robotics**
*github.com/PierreExeter/rl_reach*

**2020**   **Custom reinforcement learning environments for robotics**
*github.com/PierreExeter/custom_gym_envs*

**2019**   **Python implementation of a genetic algorithm.**
*github.com/PierreExeter/simple_GA*

**2019**   **Regression modelling for predicting house prices**
*github.com/PierreExeter/kaggle-house-prices*