Pierre Aumjaud

Machine Learning Researcher

Narbonne, France

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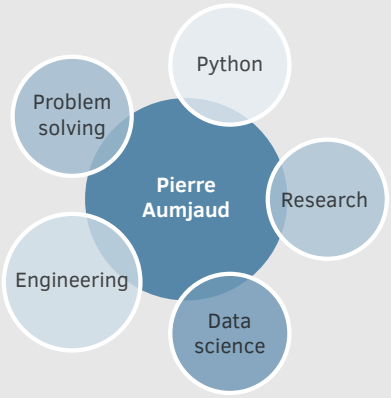
French

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