Ambroise RENAUD

Engineer specialised in Data Science and AI   *Available Now*

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Objective - To obtain a position as a Data Scientist, Data Engineer, or a data-related role, applying my skills in data analysis, machine learning, and software engineering to solve real-world challenges.

EDUCATION

Mines Paris – PSL, Ph.D. in Data Science – Paris, France   2021 – expected 2025
   Ph.D. thesis of the PSL University prepared at Mines Paris CRC laboratory.
EPFL, Academic Exchange in Data Science – Lausanne, Switzerland   2019 – 2020
   Autumn and spring semesters, focusing on machine learning, deep learning,
   mathematics, optimisation and applied data analysis courses.
   Two data science 6-months hands-on projects (at CHILI and LIONS labs).
ENSISA, Master's degree in engineering/computer science – Mulhouse, France   2017-2021
   Software engineering, computer science. Data science specialisation modules.
   Training includes management and project management.

EXPERIENCE

PhD Candidate, Mines Paris – PSL – Sophia-Antipolis, France   Dec 2021 – Dec 2024
Modelling and classification of ship radio-frequency emissions using AI.
- Conducted research on VHF propagation and AI-based radio-wave modelling.
- Designed and deployed a data acquisition, transformation, and storage pipeline in the context of big data, handling large volumes of real-time streaming data.
- Modelled VHF emission propagation using AI techniques.
- Developed, implemented, and evaluated the proposed AI-based approach.

Data Scientist, Naval Group – Ollioules, France   Mar 2021 – Nov 2021
H2020 EFFECTOR project for maritime situational awareness at strategic and tactical operations.
- Implemented a data ingestion, storage, and transformation pipeline.
- Applied semantic web technologies and ontologies for maritime awareness.

Data Scientist (Internship), Naval Group – Ollioules, France   July 2020 – Jan 2021
Optimization of AI algorithms for the integrity of naval defence systems.
- Reduced model selection cost by 10x using automated machine learning.
- Developed optimization methods with genetic algorithms and random search.

Data Scientist (Internship), NATO (CMRE) – La Spezia, Italy   June 2019 – Sept 2019
Machine learning for detecting suspicious behaviour of ships at sea.
- Designed a machine learning pipeline to classify ships behaviours at sea.
- Highlighted key features and showcased results within the operational context.

Data Engineer (Internship), Mines Paris – Sophia-Antipolis, France   June 2018 – Sept 2018
Deployment of a data acquisition station and a maritime data storage system.
- Built a data ingestion pipeline to parse and store real-time streamed data.
- Optimized query speed and storage size.

SKILS AND ADDITIONAL INFORMATION

Languages:	English (fluent, TOEIC: 960/990 – C1 Level), French (native)
Programming:	Python, C/C++, Java
Data Science/ML:	PyTorch, Keras, Scikit-learn, Pandas, Numpy, XArray, Seaborn, QGIS, Grafana
Data Engineering:	PostgreSQL, TimescaleDB, Apache Kafka/NiFi/Spark, PySpark, ELK Stack, Private clouds for distributed computing
Software Engineering:	Git, Unittest, Jenkins, Jira, Docker, Coding standards and best practices
Driving licence:	B (cars)
Activities and hobbies:	Ultra trail running, cycling, aviation photography (spotting)