

# Quentin VELARD

Paris, France

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in Quentin Velard qvelard velard.fr

MSc candidate in Applied Mathematics and Data Science, specializing in computer vision. Experienced in R&D analysis and machine learning through internships at Bpifrance and RMIT University. Skilled in Python, R, SQL. Expertise in developing machine learning models and integrating emerging technologies into innovative solutions.

## Education

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### MSc in Applied Mathematics, Ecole des Mines

Sept. 2021 – Feb. 2025

Top 5 France Engineering School

Nancy, France

- **Relevant Coursework:** Data Analysis, Machine Learning, Deep Learning, Blockchain, Time Series
- **Core Courses:** Numerical Analysis, Quantum Mechanics, Statistical Physics

### MSc in Data Science, University of Lorraine

Sept. 2024 – Feb. 2025

Dual degree

Nancy, France

- Stochastic Processes, Reinforcement Learning, Optimization, Scalable Database and System Architecture

### Bachelor of Science, Sorbonne University

Sept. 2018 – Sept. 2021

Paris, France

- Three intensive years of training in Mathematics, Physics, and Chemistry for French engineering competitive exams.

## Experience

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### STMicroelectronics

Feb. 2025 – Sept. 2025

Computer Vision Research Engineer - End-of-study Internship

Grenoble, France

- Evaluated radiation effects on semiconductor components using AI-based methods.
- Developed a tool for predicting component sensitivity based on physical descriptions.
- Transitioned the tool into production for CMOS 40nm technology.

### RMIT University Laboratory

Feb. 2024 – Jul. 2024

Quantum Machine Learning Intern

Melbourne, Australia

- Co-author (2024), **QCORD: Quantum Continual learning with Representation Distillation in Variational Quantum Algorithms**, under peer-reviewing for IEEE submission.
- Adapted a classical incremental learning algorithm into a quantum version within an MLOps framework.

### Bpifrance, Public Investment Bank

Jun. 2023 – Dec. 2023

R&D Analyst Intern

Paris, France

- Evaluated and financed digital R&D innovation projects supporting French governmental strategies.

## Projects

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### Antioxidant Biomolecule Generation via GAN and Diffusion Model

Sept. 2024 – Mar. 2025

- Developed deep learning tools to generate novel biomolecules with antioxidant and anti-inflammatory properties.

## Technical Skills & Certificates

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**Web Development :** React.js, TypeScript, TailwindCSS, Node.js (Express, NestJS)

**Data Science/ML :** Python (Numpy, Pandas, Matplotlib, Scikit-learn, Qiskit, PaddlePaddle), R, MATLAB, Machine Learning (PyTorch, TensorFlow)

**DevOps Tools :** Docker, Netlify, GitHub Actions

**Certifications :** AWS AI Practionner, DeepLearning.AI : CNN, chatbot with LangChain

## Interests

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- Member of the Student Scientific Convention on Hydrogen, supporter of The Shift Project and the French Nuclear Energy Society (SFEN), and regularly attends conferences on cryptocurrencies, blockchain, and decentralized finance.
- Sports: Half-marathons, swimming, trekking, and mountaineering.