

Vincent Lalanne

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PROFILE & SKILLS

Master's student in microelectronics and computer science at Mines de Saint-Etienne, studied the final year at The University of Auckland. Particular interest in data science, Microsoft AI-900 certification in progress. Fast learner with valuable communication and teamwork skills.

IT Languages Python | C | C++ | C# | .NET | Flask | HTML | CSS | JavaScript | SQL | Java | OOP | JSON
French (native) | English (fluent, IELTS C1) | Japanese (fluent speaking) | Spanish

EDUCATION

- 2023 – 2024
Auckland,
New Zealand

The University of Auckland | Waipapa Taumata Rau - top 100 universities worldwide

 - Year of immersion and study in computer science and software engineering
 - Relevant courses: Machine Learning | cybersecurity | C# .NET | Java | software architecture | object-oriented development | critical management | database systems
- 2021 – 2025
Gardanne,
France

École Nationale Supérieure des Mines de Saint-Etienne - top 10 engineering schools in France

 - Master of Engineering specialised in Computer Science and Microelectronics
 - Relevant courses: Machine/Deep Learning | C/C++ | pentesting | analog/digital electronics | management | signal processing | assembly and robotics | VHDL | UML
- 2019 – 2021
Nogent,
France

Lycée Marie Curie, Classes préparatoires

 - Two-year intensive program focusing on advanced Physics, Mathematics, and Engineering

EXPERIENCE & PROJECTS

- 2024
Auckland,
New Zealand

MACHINE LEARNING

classifiers for text comparison and data classification, integration of LLM

 - Coded a binary decision tree from scratch to classify samples from the Mushroom dataset. Achieved 100% accuracy in 5 splits and compared performance with different splitting criteria.
 - Created a Naïve Bayes classifier for text classification of an unbalanced dataset of scientific articles abstracts from scratch. Achieved 97% accuracy using preprocessing methods (SMOTE and noise words removal) and in-code optimisation.
 - Led in-depth hyperparameter optimisation and comparison of NB, SVM, KNN and NN for text classification using a dataset of BBC articles. Found results corroborating the knowledge in the field with a best accuracy of 100%.
 - Called and used an LLM's API in a personal Flask environment to demonstrate the influence of every parameter on performances. Studied the importance of careful and task-specific meta-prompting on safety and performance concerns.

- 2024 **WEB DEVELOPMENT**, full-stack coding of an online store
- Auckland,
New Zealand
- o Coded back-end in C# using the .NET framework, including an authentication system using a prebuilt method in .NET.
 - o Implemented and consumed several RESTful APIs to interactively display and interact with elements from a database.
 - o Created front-end with HTML, CSS and JavaScript for desktop and mobile platforms
- 2023 **INDUSTRIAL PROJECT**, automation of passive attack scripts on embedded systems
- Gardanne,
France
- o Led a team of eight students in the development of an innovative web application for a French tech start-up
 - o Developed a database-driven Flask web application (HTML, CSS, JavaScript, Python)
 - o Used network sniffing and packet analysis scripts (Python/Bash)
 - o Created a secure Raspberry PI/computer SSH communication
- Jan. 2023 **PROTOTYPING PROJECT**, design of a capacitive load cell
- Gardanne,
France
- o Worked in pairs on a force transducer operating by elastic deformation of a polymer
 - o Obtained a linear sensor with high sensitivity and low error as measured on the 3D printed prototype, by modelling on Comsol Multiphysics and using the Euler-Bernoulli beam theory
- Jan. 2022 **ENCAPSULIX**, process equipment for large-scale nano-technology Atomic Layer Deposition
- Simiane,
France
- o Joined a small team in a high-tech field as an intern
 - o Carried out a complete stock analysis and valuation operation
 - o Conducted verification of electronic and digital machine operation
 - o Performed nano-scale precision measurements with ellipsometer and spectrophotometer

OTHER EXPERIENCE

- 2021 – 2024 **Student clubs and associations**
- o **Junior Mines Provence, project manager** at my university's Junior-Enterprise
 - o Managed technical projects to ensure respectful customer/student communication
 - o Approached prospects and led negotiations to ensure the financial stability of the structure
 - o **ISMIN Business Forum, event manager**
 - o Helped with the organisation of the school's yearly expo, bringing together students and recruiters
 - o **Commission Foyer, general secretary** | student bar manager
 - o Strengthened relations with the university by setting up a system of quotes for events
 - o Facilitated the administrative process by drafting professional and adaptable templates
 - o Managed a team of bartenders and ensured high-quality service for customers
- 2022 – 2023 **Part-time jobs**
- o **Private teacher** in Mathematics, Physics, Engineering, French, and English from year 6 to Master students
 - o Management agent at the **Mines-Telecom Institute**, French public academic institution dedicated to Higher Education and Research for Innovation
 - o Helped sell local fruits and vegetables at my city's farmer's market
 - o **Bartender** for various prestigious events in the city of Auckland