Leo Pouilly

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Driven engineering student seeking to leverage robotics and AI expertise to address global challenges. Dedicated to collaborative leadership, crossing borders—both cultural and disciplinary—and fostering innovation within diverse communities.

Education

Arts et Métiers Institute of Technology (ENSAM) **Sept 2024 – Present**

Combined BS & MS in Industrial & Mechanical Engineering *3.86/4.00 GPA*

- Top 10 French Graduate Engineering School
- **Relevant Coursework:** Mechanics (fluid, solids, continuum, finite element analysis), Materials Science, Thermodynamics, Mathematics (linear algebra, matrix, vector space), Computer Science, Industrial Simulation, Entrepreneurship, Product Design & Manufacturing, Industrial Organization

Lycée Hoche **Sept 2022 – Jul 2024**

Elite undergraduate track in Advanced Mathematics & Physics ("Classe préparatoire aux grandes écoles") *4.00/4.00 GPA*

- Top 3 engineering preparatory school when I was admitted
- Intensive undergraduate program to prepare for highly competitive exams for admission to top Engineering Schools
- **Relevant Coursework:** Advanced mathematics (Algebra, Linear Algebra, analysis, topology) and Physics (mechanics, thermodynamics, electromagnetism)

Lycée Léonard de Vinci **Sept 2019 – Jul 2022**

High School Diploma, Mathematics, Physics *4.30/4.00 GPA*

- **Relevant Coursework:** Mathematics, Physics, Chemistry, Engineering Sciences

Work and Leadership Experience

Formula Student - FSAM Lille **Sept 2024 – Present**

Objective: Work on design and optimization of FSAM Lille Formula Student race car preparing for European competitions *Team of 20*

- **Corporate Relations Manager :** Lead sponsorship strategy, negotiated contracts, and managed relationships with partners to secure project funding
- **Powertrain Lead:** Supervise engine design, assembly, and performance optimization, coordinating a multidisciplinary technical team

Business Manager - Student led business consultancy AMJE Lille **Jun 2025 – Present**

Objective: Develop leadership, project management and customer relations skills while supervising engineering consultancy projects

- Prospected to promote our company and expertise
- Managed client relationships and project timelines to ensure successful delivery of engineering solutions
- Led a project to improve AMJE's web marketing strategy, enhancing online visibility and engagement with potential clients through optimized digital channels

Robotics & Automation in R&D intern - Les Companions **Jun 2025 – Aug 2025**

Objective: Supported robotics development, prototyping, and system optimization for industrial automation solutions

- Tested and improved a robotic prototype, redesigning the CAD to enhance durability and meet technical specifications
- Established measurement protocols to define optimal operational ranges for the system
- Integrated the improved prototype into a robotic cell (UR5 robot + end-effector) to achieve full functional operation
- Gained hands-on experience of mechanical design, robotics integration, and system validation

Complétude **Feb 2025 – Aug 2025**

Private Tutor — Mathematics, Physics

- Tutored **4 high school students** in mathematics, physics **adapting teaching** to individual needs
- Enhanced students' analytical skills and fostered measurable academic progress through personalized guidance

Competed in Les Entrep' Flandres (France's largest student entrepreneurship competition) **Oct 2024 – Apr 2025**

Objective: Gained experience in leadership, strategic decision-making, business analysis, and entrepreneurial mindset *Team of 3*

- Developed a startup concept and assessed its market viability through a complete business plan, BMC, PESTEL, and SWOT
- Defined the legal structure of the startup and articulated the project's potential to investors and judges
- Presented and defended the startup idea, demonstrating entrepreneurial thinking and strategic planning skills
- Learned practical skills in entrepreneurship, project management, and business strategy

Research & Development Projects

Hugging Face's LeRobot project **Sept 2025 – Present**

Objective: Gain hands-on experience in robotics engineering, AI implementation, and hardware/software integration *Individual Project*

- Built, assembled, and calibrated the SO-101 Arm robotic platform, ensuring precise movements and robust operation.
- Programmed and trained the robot using the LeRobot open-source framework to perform automated tasks

ENEDIS Data Challenge **Sept. 2025 – Feb. 2026**

Ecole Normale Superieure(ENS) ULM & Collège de France *Team of 6*

- Participating in a semester-long data challenge organized by ENEDIS,ENS Ulm, and Collège de France
- Working in a team of 6 to analyze large datasets and propose innovative solutions for real-world energy challenges
- Developing skills in data science, statistical modeling, and collaborative problem-solving in a competitive environment

AI academic project **Sept 2024 – Jan 2025**

Objective: Strengthened skills in machine learning, AI implementation, and problem-solving for robotics applications, while mastering Python, Keras, and Google Colaboratory workflows *Team of 2*

- Trained CNNs for supervised image classification on MNIST and Fashion MNIST datasets
- Performed feature extraction at dense layers and applied kNN to evaluate predictive performance
- Applied transfer learning from MNIST to Fashion MNIST to improve efficiency and accuracy
- Gained hands-on experience in CNN architecture, supervised learning, feature engineering, transfer learning

Research Project on sports betting arbitrage (Source Code) **Nov 2022 – Jun 2024**

Objective: Developed probabilistic and quantitative models to assess arbitrage opportunities in sports betting *Team of 2*

- Modeled sports betting arbitrage using sub-martingales
- Performed web scraping to collect and structure odds data from matches
- Analyzed bookmaker parameters and their influence on odds fluctuations
- Evaluated arbitrage opportunities through quantitative and statistical methods

Personal Engineering Project - Custom 50cc Motorcycle (full rebuild & optimization) **Jun 2020 – Jun 2022**

Objective: Applied mechanical, engine tuning, and integration skills to design a high-performance motorcycle *Individual Project*

- Upgraded from 50cc to 70cc Bidalot RF-WR, replaced all internal components, and fine-tuned for optimal performance
- Installed and adapted inverted R16V forks and blue anodized supermoto wheels for improved handling and aesthetics
- Mechanical integration: ensured compatibility of all new components and optimized setup for stability and performance

Technical & Language Skills

Programming: Python (Selenium & BeautifulSoup, Qt, PyTorch), C++, SQL, LaTeX

Software: 3DX, Abaqus, Onshape, Star CCM+, Excel (VBA)

Other: 3D printing, CNC machining, Welding, Foundry

French: Native

English: Full professional proficiency (C1)

Deutsch: Intermediate (B1)

Spanish: Basic (A2)

Awards & Achievements

OISE Oxford Intensive Summer Program **Summer 2023**

Intensive academic training for competitive entrance exams *Oxford, UK*

High School Diploma **2022**

Graduated with Highest Honors, Graduated top 5% of class *France*

Judo Awards

Elected "Judoka of the Year" four times at Marck Judo and the City of Marck *France*

- 5th & 9th place at the French National Championship (Minimes & Cadets) competing against athletes from national training centers
- Achieved multiple medals in international judo tournaments (minime category), demonstrating discipline, competitiveness, and resilience

Hobbies and Interests

Sports: Judo (Practicing over 14 years, black belt at 15, multiple national training camps), Motocross(Leisure)

Traveling: Gained cross-cultural insights through trips across Europe and America