

MICHEL LEROY

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EDUCATION

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Cambridge, MA

Candidate for Master of Business Analytics, Operations Research Center, August 2025

2024 - Present

- Coursework: Machine Learning, Optimization (Teaching Assistant), Analytics, Diffusion Models, GenAI
- Optimization project: Advised on business models for recycling companies using Non-Linear Optimization (Gurobi)
- Diffusion project: Researched a 2-stage finetuning technique to increase image quality by 10% using 87% less data (PyTorch)
- Machine Learning projects: Created a state-of-the-art Multimodal prediction/prescription tool (LLM TabText, CNN, Optimal Transport) for pricing second-hand clothing products, which boosted revenue by 37% (Python)
- Finetuned deep RL trading agents for interpretability and robustness against adverse attacks using OCT, SHAP, and LIME
- Clubs: Manager for MIT Climbing Wall, MIT Sailing

CENTRALESUPELEC - PARIS SACLAY UNIVERSITY

Gif-Sur-Yvette, France

Master of Science, Data Science and Algorithms, top 10% of students, 3.8 GPA

2021 - 2023

- Coursework: Statistics, Probability, Big Data Processing, High Performance Computing, Object Oriented Programming
- Analyzed lung cancer data for 10M patients for the Greater Paris University Hospitals and found 2 new biomarkers (NLP, Python)
- Refactored bike-sharing app using patterns & SOLID design to handle at scale GPS routing, station tracking, and billing (Java)
- Right winger of the Water-Polo varsity team (ranked 5th nationally), member of the disability awareness club

SORBONNE UNIVERSITY

Paris, France

Bachelor of Philosophy, majoring in Philosophy of Science and mind with Honors

2023

LYCEE PRIVE SAINTE-GENEVIEVE

Versailles, France

Bachelor of Science, 3.9 GPA

2019 - 2021

- Ranked top 2% nation-wide for my final thesis about Chua's chaotic circuit in cybersecurity
- Teaching Assistant in the critical analysis of English STEM media

TECHNICAL SKILLS

Python (Numpy, Pandas, PyTorch, Keras), SQL, R, Julia/JuMP, Java, HTML, CSS, Neo4j

EXPERIENCE

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Cambridge, MA

Research Assistant under Prof. Jacquillat at the Operation Research Center

2024 - Present

- Spearheaded a next-gen multimodal RAG for STEM Q&A increasing accuracy by 50% and robustness by 90% (Python, Big Data)
- Deployed a full-stack AI solution ensuring end-to-end deployment, soon-to-be distributed to 650k users (HTML/CSS, AWS EC2)

Analytics Lab 4-month project for Sarr Insurance

4 months - 2024

- Enhanced sampling methods to detect costly insurance claims reaching a F1-score of .53 (SQL, Python, ADASYN)
- Improved 10x the fraud detection algorithm reaching a .3 F1-score in a heavily imbalanced dataset (Python, SMOTE)

GenAI Lab 4-month project for Schneider Electric

2025 - Present

- Create an agentic workflow able to gather, interpret and synthesize information to automate daily tasks of facility managers

MIT | MCKINSEY

Member of Analytics Capstone Team

2025 - Present

- Add multimodal and low-latency capabilities to McKinsey's RAG (Lilli), enabling it to go beyond semantic search
- Embed an agentic architecture into PowerPoint to automate slide creation and increase the productivity of 45k consultants

KEA PARTNERS

Paris, France

Strategy consultant at a Top French consulting firm

6 months - 2024

- Conceived a model to simulate and optimize recyclable waste collection with Saudi Arabia's government
- Provided data-driven insights and recommendations to restructure one of France's biggest luxury companies

CEVA LOGISTICS | LVMH

Singapore

Logistics Analyst helping distribute \$4Bn worth of products across Asia

7 months - 2023

- Implemented the automation of a 120-operator workshop, increased warehouse-wide productivity by 20%
- Designed an AI tool for operations forecast and planning to manage future workload with 5x greater accuracy (Python)

FORUM CENTRALESUPELEC

Gif-Sur-Yvette, France

Chief Technology Officer at the largest student career fair in France

2021 - 2023

- Digitalized the CRM system reducing Sales workload by 80%, led 3 SWEs in a new \$500k ERP project (PHP, HTML/CSS)
- Developed and deployed an app to guide 3000 users through our events and improve their experience (React)

ADDITIONAL INFORMATION

Communication - Semi-finalist at the French national debating competition

Geology - Ranked 5th at the French Geoscience Olympiads