ALEXANDRE GRAVEREAUX
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Education

Cornell Tech, Cornell University - New York, NY
Master of Engineering in Computer Science, merit scholarship recipient May 2026
Coursework: Applied Machine Learning, Machine Learning Engineering, Trustworthy AI, Algorithms for Applications.

CentraleSupelec, Paris-Saclay University - Paris, France
Master of Science in Engineering and Applied Mathematics, GPA: 3.86/4 May 2025
Coursework: Statistics and Learning, Optimization, Object-oriented programming, Network & Security, Quantum Computing, Cloud & Distributed Computing, Web Data Intelligence.

Technical Skills

Coding Languages: Python, JavaScript, Java basics, Go basics, Swift basics, R basics
DevOps: Docker, Kubernetes, Nginx, Gitlab CI/CD, HuggingFace TGI, Terraform, Ansible, sysadmin
Data and ML: Pandas, Scikit, Pytorch, Plotly, Langchain, MySQL, PostgreSQL, MongoDB, Spark basics
Fullstack: NodeJS, Express, React, Vue

Professional Experience

Forvis Mazars, **Software Engineer Intern** - Paris, France Sept 2024 - Feb 2025

- Updated a full-stack app for cash-pooling, fixed bugs, and developed several new features. The app processes the financial data of more than **50 subsidiaries** with Python, SQLAlchemy and Alembic.
  - Added a new category of document format called Kyriba format above the existing Diapason format.
  - Implemented a messaging system between the holding and its subsidiaries, including a mail notification system.
- Updated a full-stack app for accounting financial data of a **$100b+ revenue firm**, helping accountants find inconsistencies **60% faster**. Optimized its integration into an SAP workflow through a dedicated storage system.
  - Created the year-end reporting phase: at the start of the following year, financial data is finalized, enabling accountants to close the books. Used Python, Celery task scheduler and Linux crontab.
  - Updated and deployed the application while preserving its structure and components, as well as scaling server resources to ensure that the reporting phase could run concurrently with the first quarter of the new year.
- Designed and implemented a transpiler (code converter) from SAS language to R or Python. On relevant samples, it increased the translation speed **by x3** while maintaining a level of precision unreachable by LLMs. Used ANTLR as a lexer and parser to build an Abstract Syntax Tree (AST).

Paris Digital Lab, **Software Engineer Student** - Paris, France Feb 2024 - Jul 2024

- Built 3 minimum viable products in a 7-week constraints for real-world business at @ParisDigitalLab incubator, through a selective gap-year program in partnership with CentraleSupelec school.
- Sencial: created an IOS companion app to help hearing-impaired people talk in noisy environments through AirPods, using audio modulation, allowing better voice perception for **89% of users**. Implemented with Swift.
- ElicCIR: developed a tax credit filing tool on a private infrastructure for **Thales** (Lockheed Martin French equivalent), using data parsing, generative AI and LLMs, enabling the company to **save 300k€ and 3000 hours each year**. Used Python and Text Generation Inference (TGI)
- Wiloki: optimized an EdTech company game-based learning platform's algorithm through A/B testing, aiming to accelerate middle-school student progress. Deployed simulation of hundreds of student profiles with randomized knowledge and skill levels using RabbitMQ within a large-scale Kubernetes cluster. Implemented with Go, Javascript and Python.

CentraleSupelec, **Computer Science TA** - Paris, France Sept 2023 - Oct 2023

- Led 30 hours of Information Systems and Programming tutorials for 40 students: Relational Databases, Data Structures, Network and Security, Extract Transform & Load concept.

Projects

B2B Storage space rental marketplace - Link to website
Developed a storage space rental platform for professionals, similar to Airbnb, including reservation, calendar and billing. Used Typescript, ExpressJS, React and Mantine

Game theory and prisoner dilemma - Link to Demo
Created a demo website to reproduce Axelrod's Prisoner's Dilemma tournament, a classic game theory experiment demonstrating how cooperation and competition evolve over repeated interactions. Used Python, FastAPI, and AceternityUI.

Club Experience

ViaRezo, **Devops** - Paris, France - Link to website Sept 2022 - Jan 2024

- Maintained a network infrastructure and **provided Internet access to 2000+** residents, via fiber and Wifi.
- Managed a database of **10,000+ members** and operated several websites and applications related to CentraleSupelec's student life through an Openstack virtualization cluster and a Kubernetes cloud infrastructure.
- Organized a **nationwide cybersecurity and intelligence hackathon** with the French government - TRACS