GUILLAUME EYMERY

4th year graduate Engineering Student at Arts et Métiers Institute of Technology (combine Bachelor & MSc) applying for a MSc in Industrial Engineering Georgia Institute of Technology

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EDUCATION

ECOLE NATIONALE SUPERIEURE D'ARTS ET METIERS PARISTECH (ENSAM), Bordeaux and Paris — **Sept 2022-June 2023**
Combined Bachelor's and Master's Engineering Degree — **GPA : 3.31/4.00**

- Courses in **Industrial Engineering** (Supply Chain, Production Planification), **Mechanical Engineering** (Beam Theory, Finite Elements Method, Deformable Solids Mechanics), **Mathematics/Computer Science** (Optimization, statistics, object-oriented programming), **Thermodynamics, Flow Physics,** and **Applied Mechanics**
- **Top 10** Engineering School and **n°1 Industrial Engineering School** in France

LYCEE FENELON SAINTE MARIE, Preparatory class for admission to top engineering schools (CPGE), Paris — **Sept 2019-July 2022**
Preparatory class MPSI, then PSI* — **GPA : 3.98/4.00**

- **Advanced Mathematics** (linear algebra, matrix, vector space, analytics, probabilities), **Physics** (non-linear equations, regression analysis), **Industrial Sciences** (non-linear and dynamical systems, signal processing)
- **PSI* track** is a selective Physics and Industrial Engineering class with advanced lectures with the top elements of the school
- **Top 15%** of the French Preparatory Classes

LYCEE SAINT JEAN DE PASSY, Paris — **Sept 2016-July 2019**

- **High School Science Diploma** obtained with **Highest Honors**
- **Top 5 High School** in France

PROFESSIONAL EXPERIENCES

LAMOTHE ABIET, Bordeaux – Winemaking company, leader in oenology — **June 2023–Aug 2023**
Assistant to the Supply Chain Manager (Summer Internship)
Objective: *Replace the Supply Chain Manager during his vacations and ensure the continuity of the production, logistics, and restocking of the firm*

- Developed and executed supply chain strategies to align with organizational goals, reduced costs, and improved overall performance. (+ $ 1M in product purchases)
- Replaced the Supply Chain Manager during his vacations, ensuring optimal production scheduling during that time.
- Managed company logistics in collaboration with the subcontractors (Leroy Logistics, OLANO Group).
- Overseeing and controlling the arrival of the purchase orders in the warehouse.
- Elaborated and launched a program (VBA) that cross-references the sales forecasts with the current stock and isolates the batch numbers that are at risk of expiring before they can be sold.
- Graded 100/100 in the internship evaluation by the Supply Chain Manager

GRANDES UAI, Bordeaux – Sports event
Sponsoring Branch Manager — **Aug 2023 – Aug 2024**
Objective: Organize an annual sporting event gathering over 1,000 students from all over France

- Cultivate and maintain strong relationships with sponsors and partners to secure funding, support initiatives, and drive collaboration (Red Bull, PwC Consulting, Samsung, …).
- Manage day-to-day branch operations, including staff supervision and resource allocation (+ $ 10,000 funds raised by the collaboration with sponsors during the 2023 edition).
- $ 150,000+ budget during the May 2023 event

Selected Academical projects

"Adaptive Optics and Laser Doppler Velocimetry to Determine the Retinal Blood Flow",
Preparatory Class Project, Paris — **Sept 2021 – Aug 2022** — **Grade: A+ (18.5/20)**
Objective: Build and test a Laser Doppler Velocimetry System
Inspired by a paper published by EPFL researchers, I decided to build my own Laser Doppler Velocimetry system to calculate the laminar flow of multiple liquids by measuring the speed of the microparticles located in them. I completed theoretical calculations to find a relation between the frequency shift, the wavelength of the laser, the speed of the particle, and the angle of attack. This project got me one of the best grades in PSI (Physics & Engineering Science) in France.

"Attenuation of High-Frequency Airwaves Through New Environmental Quality Buildings",
Preparatory Class Project in collaboration with Orange Laboratories at Orange Gardens, Paris, (Group of 3) — **Sept 2020 - Aug 2021** — **Grade: A+ (16.5/20)**
Objective: Evaluate and test the causes of the attenuation of high-frequency signals through building walls and find solutions to the problem
The project was initiated to study the impact of new environmental quality buildings on the transmission of wireless information through high-frequency airwaves (5G). Calculations and a program were made to predict the attenuation through the walls (based on the width & permittivity of the material). The study was successful and showed that the significant attenuation through the buildings was due to the nature of the windows.

"City Wind – Design of a Wind Turbine for Urban Usage",
Arts et Métiers project, Bordeaux, (Group of 5) — **Sept 2022 - Aug 2023** — **Grade: A+ (16.2/20)**
Objective: Design, size, and model a wind turbine suitable for urban areas
The project is driven by the climate crisis and the need to find new ways to produce decarbonated energy. Our wind turbine was inspired by a domestic prototype from the ADV-Tech Society. We started our project by realizing a Pareto Chart, drafting the specifications of the turbine

and sizing its blades through aerodynamic equations (number of blades, length, geometry, and thickness). We then sized its other components through mechanical equations (rotating shafts – in torsion and in bending –, gears and bearings). Finally, we modeled the entire wind turbine on 3DExperience (including the blades, the gearbox, and the mounting). This project earned us one of the best grades in over 30 groups from the Arts et Métiers School.

"Turbomachinery – Centrifugal Compressor Design and Fabrication"
Arts et Metiers project, Paris, (Group of 4) **Sept 2023 – Dec 2023**

Objective: Design, size, model and fabricate a centrifugal compressor that respects strict specifications

Conducted in-depth mechanical analysis of the gears' resistance with computational methods based on bending and contact criteria. Optimized the geometry of the structure using finite elements analysis with ABAQUS. Designed volute and turbine on 3D Experience and CATIA. The Centrifugal Compressor was 3D printed and successfully tested.

VOLUNTEERING / COMMUNITY OUTREACH

- **Food runs** in the streets of Bordeaux with the association **Action Froid**, providing people in need with a hot meal, blankets, hygiene products, and emotional support. Weekly food runs were organized to give back to the community. **Sept 2022 - Aug 2023**
- Dispensing weekly **free mathematics tutoring** (linear algebra, analysis, and probabilities) to preparatory class and high school students to help them overcome their difficulties or to help them succeed in the National Contest at the end of the year. **2021 – 2023**
- Performing piano concerts in the retirement home La Source d'Auteuil to entertain the elderly. **Middle School**

SKILLS

- Programming languages:
  - Python: fundamental programming principles, data treatment, analysis, and manipulation (*NumPy, Matplotlib, SciPy*), least squares method, determine solutions of ordinary differential equations.
  - VBA: data analysis, and automation in a real-world business context.
  - SQL: SQL Queries, Data Manipulation, Table Creation, Index management, Query Optimization
- Software Skills:
  - Microsoft Dynamics 365 Business Central (ERP): Data Entry and Management, Reporting and Analytics, Financial Management (purchase of raw materials)
  - 3D Experience, Catia (CAD): Part Design, Assembly Design, Generative Shape Design, Collaborative Shape Design
  - LaTeX: Mathematical Typesetting, Document Preparation
- Languages:
  - French: Native
  - English: Fluent and fully operational - TOEFL iBT: 107 (Reading 29/30, Writing:24/30, Listening: 30/30, Speaking: 24/30)
  - Spanish: Intermediate

ACHIEVEMENTS & LEADERSHIP

- **Responsible for the wine-tasting branch** of the enology association of ENSAM Bordeaux to educate the students on the science of winemaking and organize wine-tasting events: choice of wines, budget management, and organization of tasting sessions. **Sept 2023 – Now**
- **Centrale Supélec Exam**: best grade in the English Oral Exam (3,000 contestants) **July 2022**
- **Mathematics Olympiads**: selected to represent the High School **2017 – 2018**
- Selected by my local chess club for the Chess French Championships in Team. **2008**
- Responsible for the preservation and the transmission of the History of the Arts & Métiers **2023**

INTERESTS

- Music:
  - 10+ years playing the piano,
  - 3+ years' experience in Music Composition assisted by computer (FL Studio, Ableton)
  - Extensive knowledge of sound production & mastering.
- Sports:
  - Basketball: can play shooting guard and point guard
  - Track & Field: preparing for the 2024 Paris Marathon
  - Water Polo (2019)
- Chess: advanced level (rated over 1,500 on chess.com website), participated in local tournaments in Paris during elementary school
- Travelling: Discovering cultures of foreign countries (Mexico, Jordan, Cambodia…)