

# Clément DUMERIL

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**Ambitious Mechanical engineering student with strong experience in cryogenics, acoustics, structural design, and R&D leadership**

## EDUCATION

**Undergraduate Combined GPA: 3.82/4**

### Arts et Métiers ParisTech Paris, France

**2024 – present**

*Combined BS and MSc in Mechanical and Industrial Engineering, one of the most selective programs in France*

- **Relevant coursework:** Solid Mechanics, Energetics, Materials Science, Product Manufacturing, Product Design, Industrial Organization, Mathematics, Computer Science, Electronics, Probability, Statistics.

### Lycée Raspail Paris, France

**2022 – 2024**

*Classes Préparatoires, Mathematics, Physics, Industrial Science*

- Completed a two-year intensive preparatory program for competitive exams, leading to top engineering school admission.
- Relevant coursework: Mechanical Engineering, Resistance of Materials, General Algebra, Probability, Computer Science.

## WORK EXPERIENCE

### President Sales Department - AMJE - Student-Led Professional Consulting Firm (#1/200 2024)

**May 2024-Present**

*Objective: Managing commercial strategy at AMJE, drafting custom proposals, budgeting, and leading client relations*

- As a member of the Board of Directors I Led the commercial activity achieving a record first semester revenue (June-Nov) of (€160k).
- Relevant projects: Department of Homeland Security (€60k) Design a prototype of car stopper, Airflow (€13k): developed a patentable container using liquid nitrogen.

### Internship-TECHWAVE & OPEO

**May 2025-July 2025**

*Consulting Firm Specializing in Industrial Performance and Transformation*

- Designed and integrated LLM models within internal tools to support decision-making and operational efficiency.
- Collaborated with engineers and consultants to prototype intelligent features and document technical specifications.

### Private Tutor in Mathematics

**2022-2024**

*Objective: Provide personalized academic applied in mathematics*

- Supported children of diplomats with tailored, bilingual tutoring to strengthen STEM skills and confidence.

## Selected Academic & Research Projects

### Deployment Mechanism Prototype for the French Department of Homeland Security

**2025-present**

*Project Manager within a team of 5 | Best Engineering Project – awarded by ALTEN*

- Supervised a 5-member Arts et Métiers master's student team, guiding the CAD design, simulation, and end-to-end integration of complex electromechanical and hydraulic components.
- Spearheaded a critical R&D mission for the French Ministry of the Interior, leading the conceptual design of an innovative vehicle immobilization system. Focused on material engineering (lamellae coating and vulcanized adhesive selection) and modeling the pneumatic deployment system.

### Glenoid Prosthesis Design & Biomaterial Characterization- IBHGC-CNRS

**2024-present**

*Research Project within a team of 4*

- Led the design and analysis of a glenoid prosthesis, focusing on polymers/biomaterials and their mechanical performance to solve rocking horse issues.
- Conducted mechanical testing (IBHGC) and material characterization (rheometry, extrusion, FEM) at the PIMM Laboratory.

### Cryogenic container optimization for nitrogen heat exchange -Airflow

**2024-2025**

*Project manager within a team of 3*

- Designed and optimized the internal piping of a cryogenic container on CATIA a CAD tool, to enhance nitrogen thermal exchange efficiency.
- Compared multiple exchanger configurations (length, diameter, fins) through STAR-CCM+ simulations and analytical models.
- Collaborated with the client's R&D to prepare design revisions and validate simulation results with experimental feedback.

### Helmholtz Resonator Study – Acoustic Attenuation

**2023-2024**

*Research Project – Individual Work*

- Modeled the acoustic behavior of single and double Helmholtz resonators using equivalent impedance methods on COMSOL.
- Conducted experiments to validate theoretical predictions and measured attenuation of sound waves in ducts.

## Volunteer Experience

### Recyclerie Solidaire – Châlons-en-Champagne, France

**October 2025**

- Participated in and helped lead a group of 40 engineering students in sorting and organizing materials for the local recycling center.

### Staff member of Paris roller

**2024-present**

*Community sports Engagement*

- Organize a weekly run in Paris with hundreds of participants, coordinating logistics and guiding inexperienced skaters.

### Volunteer Musician – Guinean Dance Association, Paris

**2021-present**

*Community Arts and Cultural Engagement*

- Perform live music during cultural dance events and community gatherings.
- Contribute to promoting Guinean heritage while supporting artistic outreach in underserved areas.

## Leadership and Achievement

**Professional:** Trained and led a group of 30 student project managers of the number #1 Junior Enterprise out of 200 in 2024. Personally managed €60k projects while supervising the other 50 projects generating €300k per year, culminating in my participation in the final of the EY AI Innovation Award in France, in the context of the Junior Enterprise Movement.

## SKILLS

**Languages:** Native French, Fluent English (TOEFL IBT: 106/120), Advanced German, Oral Swahili

**Programming & Software:** Python, Excel, 3DEXperience, Catia V5, Star-CCM+, Power BI, COMSOL

**Interests:** Drummer in cultural associations, climbing (7 years), Skating