

Aloyse Maille

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Junior undergraduate student at Cornell University in Mechanical and Aerospace Engineering

Work Experience

- **Researcher at ZT Group, Cornell (September 2023 - Present)**
 - AFOSR sub-team: Research on the impact of 2D-materials on phonon decoherence in quantum devices.
 - Qubits and resonators fabrication process design and implementation.
 - Received the Summer 2025 Research Award funded by Boeing.
 - Work performed in the CNF cleanroom.
 - Technical skills and tools: optical and e-beam photolithography; reactive ion etching; AJA sputter and AJA ATC 1800-HY tools for ion milling and controlled oxidation; DC probe station and KLA P7 profilometer. Micro-bonding and PPMS tools (CCMR Cornell).
- **Summer Polo Coach Assistant, Cornell Athletics (May 2025 - August 2025)**
 - Oversee and perform the training of the new varsity polo horses for the Fall season.

Academic Profile

- **NASA L'SPACE Program - MCA Academy (January 2025 - May 2025)**
 - 2 roles: Lead System Engineer and Mission Outreach Officer.
 - Mission task: gain understanding on Venus and the interaction between its surface and atmosphere with the use of an Aerobot system. - My team designed the 5 subsystems of the Aerobot and defined the science objectives, requirements, risks and TRLs.
 - 7 technical deliverables produced.
 - Technical tools: NX Siemens, JMARS, risk matrix, N2 diagram, Gantt chart, Budget chart, Science Tracability Matrix, Trade Studies.
- **Cornell Engineering - Bachelor of Science (2023 - Present)**
 - Mechanical Engineering with a focus on Aerospace (current GPA: 3.999).
- **French Baccalaureate - Highschool : Fénelon Sainte-Marie (Paris, France) (2023)**
 - Summa Cum Laude with jury's felicitations, English European section.

Athletics

- **Cornell Varsity Polo Women's Team (September 2023 - Present)**
- **Cornell Taekwondo Club (September 2023 - Present)**
- **Horse-riding - Haras de Jardy Competition Team (September 2018 - July 2023)**
 - 2 National titles at the 2022 French National Championships : Eventing - Bronze medal and Show-jumping - Gold medal.

Languages

- French - Native
- English - Bilingual proficiency
- German - Conversational (CECR B1/B2 certification)

Personal Skills

- Adaptability, problem solving and out-of-the-box thinking
- Teamwork, communication and leadership
- Determination and enthusiasm to learn
- Design (Procreate, Canva, CAD)
- Digital (Microsoft Office Suite and Google Workspace, Python, MATLAB)

Relevant Coursework

- Completed: MAE 2250: Intro to Mechanical design; MAE 2030: Dynamics
- In Progress: MAE 5065: Introduction to Spaceflight Mechanics; MAE 3230: Fluid Dynamics; MAE 3260: System Dynamics; MAE 3270: Mechanics of Engineering Materials.