

# Achille Fruchard

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## 🎓 EDUCATION

**Mines Paris - PSL**, *Master's degree in Engineering* 09/23 — present  
Applied Mathematics, Quantum Physics, Computer science  
**Lycée Montaigne Bordeaux**, *Preparatory classes for Grandes Ecoles* 2021 — 2023  
Intensive Classes in Mathematics and Physics, Valedictorian of class  
Bordeaux, France

## 📁 PROFESSIONAL EXPERIENCE

**Nuclear physics and high energy lab (LPNHE)**, *Lab intern - Cosmology* 11/24 — 02/25  
• Detection of blurring effects on telescope's cameras  
• Mass treatment of astronomy data  
Paris, France  
**KPNS-Piramide**, *Intern in chemical factory* 04/24 — 05/24  
• Help with production of chemical compounds  
• Assisted workers with the logistics  
Saintes, France  
**Mines Paris - MIG**, *Engineering project at Mines Paris - Lithium* 10/23 — 11/23  
• Study of lithium mines projects in France  
• Use of professional softwares to simulate geology  
Paris, France

## 📁 PROJECTS

**Ergonomy - VR**, *Virtual Reality application* 09/24 — 12/24  
• Developed an application in Virtual Reality with movement trackers for sports learning and help with rehabilitation of disabled people  
• Worked with Unity and Blender, coding in C#  
**Drone**, *Design of a quadricopter drone prototype* 02/25 — 05/25  
• Design and assembly of the structure of the drone  
• Blades prototyping and printing  
• Imposed constraints in weight and blade noise  
• Successful flights and manoeuvres  
**3D scanner with mobile phone**, *Project for an industrial company*  
• Easy to use scanner using two mobile phones to 3D scan objects  
• Use of trained models to generate depth maps  
• ICP and point to plane algorithms in python

## 🏠 ORGANISATIONS

**Cartel Paris 2025**, *General Secretary* 12/23 — 04/25  
• Organisation of a 2000 people inter-university sports tournament  
• Management and planning of all the staff (150 volunteers)  
• Managed all the logistics of the event  
Paris, France  
**Minestry**, *Chairman of the association* 12/23 — 02/25  
• Chairman of lighting association for Mines Paris events  
• Installation of fixtures and programmation of light shows  
• Maintenance and acquisition of fixture  
Paris, France  
**Lycée Saint Louis**, *Tutor for freshmen students* 2023  
Tutoring in Mathematics, Physics and Python classes  
Paris, France

## 💻 CUSTOM

**Languages - Proficiency** **Software**  
French - Native, English - Fluent  
Git, Unity, Adobe Suite, Fusion 360, Microsoft Office  
**Programming Language** **Libraries**  
Python, C#, Javascript, C++  
OpenCV, Numpy, Pandas, TensorFlow, Matplotlib, PIL

## 🔗 INTERESTS

Windsurf | Computer science | Robotics | Trumpet