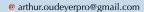
ARTHUR OUDEYER

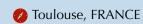
ISAE-Supaero, **Engineering Curriculum**







in <u>linkdin</u>



PROJECT

Currently studying science and engineering at ISAE-Supaero (Toulouse), I am interested in aerospace, computer science, and understanding physical and biological phenomena. I am moving towards research or engineering on cutting-edge topics.

EXPERIENCE

Sabena technics - Internship

June-July 2025 - Worker Technical assistance on A300-600 ST Aeronautic Maintenance

Valemo - Internship

June 2021 - Observation Installation and Management of Wind Farms and Photovoltaic Parks Electric networks - Control

Toulouse Institute of Fluid Mechanics - Internship

June 2021 - Discovery Internship Flow control, boundary layer instabilities Simulation - Fluids models - Optimisation

Dronisos - Internship

Juillet 2020 - Observation

Development of drone fleets and creation of shows

Drones fleet - Automatic - Communication Networks

Aérocampus Aquitaine - Internship

Juin 2019 - Observation Mechanics and Avionics Training, Events Mechanics - Avionics - Administration

FORMATION

♦ ISAE-Supaero (Toulouse, France)

2024-2025 - Engineering Curriculum

World leader in aerospace education

Aerodynamics - Fluid Mechanics - Computer Science - Embedded Systems - Thermodynamics - Materials

CPGE Lycée Saint-Louis (Paris)

2022-2024 - MP2I, PSI

Preparation for the **CPGE science competitive exam** *Algebra - Analysis - Computer Science - Mechanics*

Lycée Français Stanislas (Montréal) - Terminale 2021 - Baccalaureate with honors

Personal Project

Informatics projects are an opportunity to explore, discover, and improve my skills in many different areas.

Details : Github Personnal Page
Project Siteweb
Projects Videos Demos

IA for Science:

- Evolutionary Algorithm (<u>Cellular Automata</u>, <u>Walk</u> <u>Learning</u>) (see <u>Cellular Evolution</u>, <u>Hestia</u>)
- Neural Networks (see <u>AI models to predict trajectories of paper airplane</u>)

Physics Engines:

- Newtonian Mechanics (<u>Celestial Simulation</u>, <u>Springs</u>)
- Verlet Integration (Particle Base 2D Engine)

SKILLS

Techniques:

- Frameworks/Languages: Python (Avancé), C/C++, Java, RaspberryPI, Arduino, ESP32, Teensy, Pygame, Scikitlearn, PlatformIO, SQL, OpenCV
- Tools: Git, Docker, VScode, Pycharm, Ableton Live, Solidworks, Fusion, FreeCAD, OBS
- Manual: 3D Printing, Electronics, Soldering, Wood work, Laser Cutting

Language:

- French (Natif)
- English (Fluide)
- Spanish (Notions)

SCIENCE Interest

- Technical Clubs :
 - Technologic Club (Autonomous Martian Rover, competition CGénial) (2016-2019)
 - StanRobotix (concours First Robotics) (2021)
 - Robotik (Président 2025-26), National French Robotic Cup (2024-2025)
- Participation:
 - General Mathematics Competition (2022)
 - Club Maths+ (2021)
 - Alkindi competition finalist (Cryptologie, 2019)
- Aeromodeling: Design and creation, mechanics and electronics of RC models

CULTURAL Interest

- Music: Computer-aided music production (DAW), sound engineering, voice recording
- Workshop art : drawing, painting, sculpture (2025)
- Sport: Tennis, Breakdancing (club president), Triathlon, Ultimate
- **Citizenship**: Member of the Youth City Council (2014-2015)

Biology and Terrain:

- Behavior (Ants, Shoal of fishes)
- Terrain generator (Map Generator)
- Particle simulation (Particle interaction)

Games:

- Arcade games (see Space Frontier, Sky Fighter, FPS Jet, Mini Racer)
- Platformers (Platformer, MissionZ)

Images:

- Colors processing (*Vibes*)
- Fourier Image Compression (DFT)

Challenges:

- Root-me (Cyber-security, cryptology)
- Advent of code
- FrancelOI