

I dedicate myself fully to all the projects I undertake, striving to exceed expectations and push boundaries. My professional goal is to combine my acquired technical and artistic skills.

Formation

- 2021-2026 **Master's degree in Industrial Engineering (spec. in electromechanics)**
ECAM Brussels Engineering School, Woluwe-Saint-Lambert
- 2021-2025 **Art education: Computer graphics and digital arts**
Académie des beaux-arts, Watermael-Boisfort

Languages

French, English (B2)

Experiences



03/2026 → ■ **Design and implementation of a manufacturing and inspection procedure for mechanical parts**
Walibi Belgium, Wavre

Analysis of critical components from roller coaster systems manufactured by INTAMIN, MACK RIDES, and GERSTLAUER, based on technical drawings and maintenance data, followed by the definition of technical and normative requirements applicable to the amusement park industry (EN 13814), as well as manufacturing, inspection, and material selection constraints. Mechanical parts were redesigned using SolidWorks, including the study of dimensional and geometric tolerances in relation to functional interactions, fits, and manufacturing constraints. Collaboration with specialized laboratories and subcontractors for the execution of chemical analyses, metallographic examinations, hardness measurements, and mechanical testing in order to characterize materials, heat treatments, and associated properties.

01/2026 → ■ **Thesis – Design and implementation of an animation system for the “Mecalodon” attraction**
Walibi Belgium, Wavre

Design and development of an animation system integrated into the ride layout, including the production of electrical schematics with sizing of installations (short-circuit and residual current protection devices, cables and equipment), hydraulic diagrams, control and command systems, as well as installation layout drawings. The project also includes technology selection, consideration of constraints related to the existing installation, coordination with suppliers, and procurement follow-up.

The full on-site installation is currently being carried out with the support of technical teams, including the assembly and wiring of the electrical cabinet, as well as the hydraulic installation. A testing and programming phase of the animation system via DMX will then be conducted to validate system operation and performance. Finally, maintenance and servicing instructions will be established to ensure long-term reliability of the installation, considering the submerged operating conditions of part of the system.

2023-2025 **Cours particuliers**
MySherpa, Bruxelles

Providing support to high school students in mathematics, physics, and study skills courses.

Personal projects

- 2022 → **Okbots Expedition**
Development of a video game using the Unreal Engine (and various production software). Graphic design, programming, gameplay, and audio design are all done personally.
- 2020 → **Graphic designs and illustrations**
Production of original illustrations with a unique graphic style and development of visuals adapted to different creative projects. More informations: aurelienpetit.com

Professional software

Aspect technique : Solidworks, Matlab, Abaqus, Eleccalc, Fusion

Aspect créatif : Unreal Engine 5, Final Cut Pro, Motion, Logic Pro, Affinity

