Boulhit Walid

+212-626-398-923 | aboulaakoul.ensa@uhp.ac.ma | LinkedIn | GitHub

Education

ENSA Berrechid, Hassan 1st University — Berrechid, Morocco
Engineering Degree in Aeronautical Engineering (Embedded Systems) — *2025 – Present*

- Relevant Coursework: CAD (Catia V5), Signal Processing, Thermodynamics, Heat Transfer, C++, Python.
- **Member of Aero Club ENSAB:** Active participation in technical workshops and drone design competitions.

ENSA Berrechid, Hassan 1st University — Berrechid, Morocco
Preparatory Cycle (Maths, Physics, Engineering Science) — *2023 – 2025*

Engineering Projects

Boeing 737-9 MAX Surface Modeling | *Catia V5 (GSD/Assembly), Aerospace Design* — Jan 2026 – Present

- **Advanced Surfacing:** Full 3D modeling of the fuselage and wings using Generative Shape Design (GSD) to ensure aerodynamic continuity (Class-A surfaces).
- **Assembly Management:** Managed a large-scale assembly hierarchy, integrating landing gear and empennage structures with precise constraints.
- Reverse-engineered structural components based on technical blueprints to validate geometric accuracy.

Radial Engine & V8 Mechanism Design | *Catia V5 (Part/Kinematics), Mechanics* — Jan 2026 – Present

- **Mechanical Design:** Detailed parametric modeling of engine components (pistons, connecting rods, crankshaft) using Part Design.
- **Kinematic Simulation:** Simulated the combustion cycle movement using DMU Kinematics to detect collisions and validate clearance.
- Generated 2D technical drawings (Drafting) with GD&T standards for manufacturing specifications.

Thermal Dissipation Analysis | *Python, Thermodynamics, Numerical Methods* — Jan 2026 – Present

- Developed a numerical solver in Python to model heat transfer (Conduction/Convection) in engine cooling fins.
- Simulated steady-state temperature distribution across cylindrical geometries using Fourier's Law.
- Visualized thermal gradients to optimize material selection for high-temperature aeronautical applications.

Technical Skills

CAD & Simulation: Catia V5 (Expertise in Part Design, GSD, Assembly, Drafting), DMU Kinematics, Proteus.
Engineering Science: Thermodynamics, Heat Transfer, Signal Processing (FFT, Filtering), Mechanics of Flight.
Programming: C/C++ (Embedded), Python (Scientific Computing: NumPy, Pandas), Arduino, MATLAB.
Development Tools: Git/GitHub, LaTeX, React.js (used for telemetry visualization).

Professional Experience

Engineering Fellow (Agile Projects) — Sept 2023 – Present
ALX Africa & Meta Certification — *Remote*

- Collaborated in agile teams to deliver complex technical projects under strict deadlines.
- Developed rigorous documentation and version control habits (Git), transferable to industrial quality standards.
- Gained proficiency in data structuring and UI logic, enhancing ability to design intuitive control interfaces.

Certifications

Python for Everybody Specialization (Univ. of Michigan) – *Data Structures & Algorithms*
Meta Front-End Developer Certificate – *Project Management & UI Design*