

# Robert ANTALUCA

+33 (0)7 83 35 20 85 | [robert@antaluca.com](mailto:robert@antaluca.com) | [Linkedin](#) | [Personal Portfolio](#)

Engineering student, seeking a 6-month internship starting from August/September 2024

## EDUCATION

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**University of Technology of Compiègne - Sorbonne University (UTC)** Expected June 2026  
*Master's degree in Computer Science, specializing in Embedded Systems and Robotics.* Compiègne, France

## EXPERIENCE

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**Student Intern, Machine learning & Computer Vision** Jan - Feb 2023  
*Virobotic (Robotics startup)* Amien, France

- Contributed to training a pre-existing YOLACT-based machine learning model for a computer vision system, intended for integration with industrial robots. This involved constructing and annotating datasets.

**Team Leader** Member since 2022  
*University Robotics Team* Compiègne, France

- Managed 15 engineering students, within the University Robotics Team, in the development of a robot for National and European robotics competitions.
- Implemented ROS (Robot Operating System) in our robot with the programming team.

**Lab Coordinator** Sep 2022 - Feb 2023  
*University FabLab* Compiègne, France

**Student Intern, Prototyping** July 2019  
*University of Technology of Compiègne* Compiègne, France

- Developed and prototyped an educational simulation platform for urban thermal management courses at the university, integrating thermal regulation and heating systems.
- The platform supports programmability with different control strategies, including PID, PI, PD, and on-off-control.

## PROJECTS

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**Pillminder, Automatic Medication Dispenser** | *PCB Design, Firmware, CAD* Since July 2023

- Created an innovative prototype of an automatic medication dispenser at the European Innovation Academy, collaborating with an international team.
- Currently developing a device for mass production, which includes a custom PCB, firmware, and industrial design.

**Autonomous Quadruped Robot** | *ROS, SLAM, CAD* Since Jan 2024

- Designed a ROS-based autonomous quadruped robot equipped with LiDAR-based SLAM, IMU, computer vision capabilities.

**Board Game in C++** | *C++, QT, SQL, Team Work* Sep - Dec 2023

- Developed a digital version of the Splendor Duel board game featuring save functionality and an AI opponent, utilizing C++.

**Scan N' Order** | *Web, Vue.js, Firebase* April 2020 - Jan 2021

- Launched a web app used by 10 restaurants during pandemic to offer interactive virtual menus to their customers, using Vue.js and Firebase.

## TECHNICAL SKILLS

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**Languages:** Native French, Full working proficiency in English and Romanian

**Programming:** Algorithmics, C, C++, Python, Object Oriented Programming, Computer Vision: (Yolact), Shell, R, MATLAB, Expert Systems, Logic & Dynamic Programming.

**Embedded systems and Robotics:** R.O.S (Robot Operating System 1 & 2), VHDL, Assembly, Control Theory, SLAM, Odometry, Path Planning, Sensor Fusion, PCB Design (EasyEDA)

**Hardware:** Sensors (Lidar, Inertial measurement unit (IMU), Camera, Odometer), Actuators, Microcontrollers (Raspberry Pi, Esp32, Arduino, FPGA)

**Tools/Others:** CAD (Fusion 360 / CREO / Sketchup), Prototyping, 3d Printers & Laser Cutters, GIT, Linux, Docker, Productivity Applications