BIECHE ADÉAS MATYS

Engineering Student in Mechatronics & Robotics

- Minor in Security & Defense

4 months internship starting April 2025

: France (willing to relocate)
: +262-692001999
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SKILLS

Programming

Experienced

Python | C

Proficient

C++ | C# | Java | Fortran

Tools/Applications

ROS/ROS2 | MATLAB/SIMULINK
CatiaV5 | SolidWorks | Visual Studio
CubeIDE | MPLABX
Pack Office | Photoshop

Linguistics

English (C1) - oral and written fluency
German (C1) - oral and written fluency
Chinese (A1-A2) - basic notions
French – Mother tongue

PROJECTS

Robot : As part of the electronics course, complete programming of an autonomous robot in C

Turtlebot : Coded a Turtlebot using ROS to test obstacle avoidance algorithms

CS Group : Built an embedded camera alignment tool using sensor fusions and Kalman filter

Savonius Windturbines : Built a windturbine that produces 12 Volts

SharkShield Study : Study on the efficacity of Shark repellent equipment in various conditions

EDUCATION

The Institute for Advanced Studies in National Defense — 2024 - Today
Courses on national defense and security concerns, national strategy, geopolitics and ethics.

SeaTech Toulon, School of Engineering — *2023 - 2026*
- Functional analysis of systems
- Sensors, vision, actuators, instrumentation, cyberphysics
- Digital engineering, programming and object-oriented mechatronic simulation
- CAD, manufacturing
- Smart factory, industrial production management
- Land & Underwater robotics
- Electronics Networks, embedded computing
- Human Science, Economics, Management, Accounting

EXPERIENCE

ROBOT CLUB TOULON | Robotics Engineering | *2023 - Today*

- **Robot Club of Toulon** from Toulon University
- Participate in the **Robocup 2024** in **Middle Size League**
- Currently focused on enhancing the **Goalkeeper robot's arm** precision and refining its autonomous **gameplay** capabilities
- Worked on **Lidar** data processing algorithm resulting in the filtering of **dynamic objects** in fast and complex environments.
- Attempt **SLAM** implementation, creating a program to evaluate **ICP** approaches for potential Lidar-based positioning enhancements
- Enroll in **Aqua.Bot 2024**, developing mission systems for **autonomous marine drones** using **ROS2**.
- Conduct robot testing, proposing and implementing innovative solutions
- Apply hands-on technical skills in wiring, assembly, and laser cutting for prototypes

AEROTECH | Mechatronics Engineer | *2023 - 2024*

- Successfully designed and constructed a **Tilt-Rotor VTOL** aircraft for the **DASSAULT UAV CHALLENGE 2023/2024**
- Led the mechanical design and embedded electronics integration
- Implemented **AI-based** object recognition system using Jetson Nano, to enhance the **UAV's autonomous navigation** and mission capabilities
- Utilized **CATIA V5** for precise 3D modeling

BDE CPGE LLL *(non-profitmaking organization)* | President | *2022- 2023*

- **Collaborated** closely with administration and **team members** to support decision-making processes within a student organization
- Orchestrated successful **fundraising initiatives** and **events** (Telethon, group outings, induction evening, sale of goodies, buffet, etc.)
- Managed b**udgets** while ensuring clear communication with stakeholders.

York Lubricants | Intern | *2024*

- Delivered an engineering expertise on various problematics
- Discovered the production line. Reflected and worked on its **automation**

McDonald's | Team Leader & Trainer | *2023 - Today*

- Recognized as **Employee of the Month** multiple times
- **Collaborate with team members** in a fast-paced kitchen during peak hours
- Demonstrate speed, efficiency, and a strong sense of responsibility in all tasks

Others | Multiple short experiences | *Since 2018*

- **Nasa Open Science** certificate
- Student **ambassador** & class **representative**
- Internship in the **French Air Force** : Discovery of military professions and the aeronautics sector
- Exhibitor for **Papangue ULM** during the BA181 open days in honor of Roland Garros