



# Gauché Clément



Engineering diploma and Master's degree  
Automatics & Electronics Department  
National Institute of Applied Sciences, France

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## EDUCATION

Degree/Certificate	Institute/Board	Specialty	Year
Eng. diploma	National Institute of Applied Sciences, France	AE	08/2025
Master Degree	INSA & ENSEEIHT	REOC	08/2025
Associate Degree	Toulouse University	GEII	08/2022

## EXPERIENCE

- Schaeffler**  09/2022 - Today  
*Embedded software developer* Toulouse, France - Iasi, Romania
  - Secure Software Development** HSM (Hardware Security Module) driver activation, development and test.
  - Driver Development** Microchip Wake-Up Controller reprogramming and complex driver development for Infineon microcontrollers (TC3/4).
  - Collaboration** Worked with Romanian and French teams.
- Vitesco Technologies**  05/2022 - 08/2022  
*Associate Degree End-of-Study Internship* Toulouse France
  - Signal Simulation** Designed and implemented signal generation tools for testing embedded systems using SENT, CAN, and LIN protocols.

## PROJECTS

- Secure Communication Module** 09/2022 - 03/2023  
*Microcontroller and Cryptography* Schaeffler France
  - Feature Development** Integrated cryptographic protocols for secure boot and secure software updates.
  - Testing** Developed comprehensive test cases covering failure scenarios in HSM.
- WISPERS: Wireless System for Intracranial Pressure Monitoring** 09/2024 - 01/2025  
*Innovative Project* INSA Toulouse
  - Wireless Communication Protocol** Implementation of RuBee protocol for robust, low-power, and secure data transmission.
  - Hardware Design** Designed PCBs for data modulation and communication with intracranial sensors.
  - Medical Interface** Collaborated on a web interface for real-time data visualization and management by medical staff.

## SKILLS

- Programming Languages**: C, C++, Python, Java, VHDL.
- Microcontrollers**: Microchip, Infineon TC3/4, Renesas RH850, Expressif (ESP8266/32).
- Technologies**: Embedded Systems, HSMs, LoRaWAN.
- Tools**: MATLAB, Simulink, Mininet, OpenStack, Docker, Git, KiCad, Altium, LTSpice, LauterBach, TESSY (Test System).

## COURSES

- Control Systems** Analysis of complex systems using theoretical approaches and simulations with MATLAB.
- Electronics** Circuit design and dimensioning, simulations with LTSpice, and PCB routing with KiCad.
- Embedded Computing** Programming with various languages and microcontrollers.
- Service-Oriented Computing** Design and implementation of resource-oriented web services.
- Networking** Modeling of MAC and physical layer networks, study of physical networks, and virtualized deployments with OpenStack, VirtualBox, and Docker.
- Virtual Networks** Theoretical concepts and practical implementation with Mininet.
- Constrained Networks** Design, analysis, and evaluation of critical real-time systems.
- Industrial Computing** Development of automated applications and systems.

## CERTIFICATIONS

- ETS Global**, **TOEIC** 05/2024