

QUENTIN BERNYER

MSC STUDENT IN ELECTRONICS, EMBEDDED SYSTEMS & TELECOMMUNICATIONS

SEEKING A 6-MONTH FINAL-YEAR INTERNSHIP · APRIL – SEPTEMBER 2027



WEBSITE



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PROFILE

Professional, motivated and organized, with solid experience across various technical fields and a proven ability to work in a team. I adapt quickly to new situations. Autonomous, versatile, punctual and a good listener.

PROFESSIONAL EXPERIENCE

- OCT 2025 – JUL 2026** **FIXED-TERM CONTRACT: INTRACRANIAL PRESSURE SENSOR & COMMUNICATING SYSTEMS**
LAAS-CNRS LABORATORY – MINC TEAM, TOULOUSE, FRANCE
- ANR WISPERS project: design and testing of an LC intracranial pressure sensor based on resonance-frequency tracking.
 - Design and testing of LoRa, BLE and backscatter communicating sensors with an added physical-layer security.
 - State-of-the-art reviews and research articles published at JNM 2026 and IEEE WPTCE 2026 (Halifax).
 - Skills: research, state of the art, scientific writing, electronic design, programming, electronic fabrication, RF simulation, RF applications, project management.
- JUL – AUG 2025** **INTERNSHIP: WIRELESS POWER TRANSFER COMMUNICATING SYSTEMS**
LAAS-CNRS LABORATORY – MINC TEAM, TOULOUSE, FRANCE
- Contribution to the MINC team's flagship project on the energy autonomy of communicating systems: powering sensors and embedded devices without batteries, for smaller and more sustainable electronics.
 - Skills: research, electronic & PCB design, STM32 programming, electronic fabrication, RF applications, project management.
- MAR – JUN 2024** **INTERNSHIP: ORBITAL OBJECT IDENTIFICATION BY RFID**
IMS LABORATORY – CNES – UNIVERSITY OF BORDEAUX, FRANCE
- With the growing number of low-Earth-orbit satellites and the risks of collision and spying, R&D of a long-range backscatter RFID demonstrator to identify and protect LEO satellites.
 - Skills: research, antenna design, RFID, electronic & PCB design, electronic fabrication, programming, project management.
- APR – JUN 2023** **INTERNSHIP: 6G VEHICLE**
INSTITUTE OF INDUSTRIAL SCIENCE (IIS), DLX DESIGN LAB – UNIVERSITY OF TOKYO, JAPAN
- Two-month international internship (Kashiwa campus) within the Beyond 5G mobility project: R&D of an autonomous vehicle prototype using 6G waves for geolocation.
 - Skills: research, English communication, electronic & PCB design, 3D modelling & printing, laser cutting, Arduino programming, mobile app development.
- 2020 – 2023** **SEASONAL JOBS**
INTERMARCHÉ, CASTELJALOUX · I2C, MARMANDE (FRANCE)
- Drive-through assistant & cashier – Intermarché (Aug 2021, Aug 2022, Aug 2023): order preparation, checkout, customer service and deliveries.
 - IT assistant – i2C (Jul – Aug 2020): IT equipment deployment, hardware refurbishment, system installation and configuration.

EDUCATION

- 2024 – 2027** **MASTER OF SCIENCE (MSC) IN ELECTRONICS, ELECTRICAL ENGINEERING & AUTOMATION**
ESET track – Embedded Systems Electronics & Telecommunications. Université Toulouse III – Paul Sabatier, Toulouse, France.
- 2021 – 2024** **BACHELOR OF TECHNOLOGY (BUT) IN ELECTRICAL ENGINEERING & INDUSTRIAL COMPUTING**
Three-year degree (180 ECTS). IUT de Gradignan – University of Bordeaux, France.
- 2022 – 2024** **CERTIFICATIONS**
- Linguaskill English (Cambridge) – level B2, score 174 · 2024
 - HAREC amateur radio operator certificate (ANFR) · 2024
 - B1V electrical safety clearance · 2022
- 2021** **FRENCH TECHNOLOGICAL BACCALAUREATE (STI2D)**
Industrial Science & Sustainable Development – Digital & Information Systems option (SIN). Lycée Val de Garonne, Marmande, France.

SKILLS AND EXPERTISE

PROGRAMMING

C, Python, Arduino (advanced) · VHDL, SQL, SysML, UML (working knowledge)

SOFTWARE

- Qucs Studio 
- Easy EDA 
- Excel 
- LTSpice 
- STM32Cube 
- KiCad 
- Sim FEKO 
- GNU Radio 
- Fusion 360 
- Proteus 

RF & TELECOMMUNICATIONS

- In-depth knowledge of electronic and RF systems
- Smith chart, impedance matching, S-parameters (VNA)
- Antenna design (HB9CV, direction finding), backscatter RFID
- RF energy harvesting & wireless power transfer
- SDR (GNU Radio, RTL-SDR), OOK/FSK modulation, PLL

EMBEDDED & INSTRUMENTATION

- STM32, LoRa / LoRaWAN, BLE
- Embedded security: AES encryption, physical-layer security
- FPGA: 4-bit microprocessor in VHDL
- MEMS design, packaging & assembly
- Test-bench automation (Python, PyVISA), FFT analysis

FABRICATION & WRITING

- End-to-end electronic fabrication: SMD & through-hole placement, iron & reflow soldering, wire bonding, then testing with measurement instruments
- CAD, 3D modelling & printing, laser cutting
- Technical reports, state-of-the-art reviews and research article writing

LANGUAGES

French	Native
English	B2

PROJECT HIGHLIGHTS

- Wireless battery-free LoRaWAN sensor – solar & RF energy harvesting (M1 project, 2025)
- IEEE WPTCE 2024 Student Competition, Kyoto – wirelessly powered levitating lamp (2024)
- Signal conditioner for a magnetic levitator (2023)
- 6G vehicle prototype – University of Tokyo (2023)
- HB9CV antenna for radio direction finding (2023)
- Autonomous mini-sumo robot (2022)
- Propeller-driven kart (2022)
- High-precision LED baby bath thermometer (2021)
- Light-up safety armband for cyclists (2021)
- Warehouse security robot (2020)
- Connected mirror (2019)

COMMUNITY INVOLVEMENT

- Volunteer, 12th European Workshop on Structural Health Monitoring (EWSHM), Toulouse – 2026
- LAAS-CNRS Science Day – 2025
- IUT GEII Open House, Gradignan – 2023
- Association des Jeunes Meilhanais (youth association, communication team) – 2019-2023

REFERENCES

- Alexandru Takacs, Associate Professor, LAAS-CNRS (MINC team) — internship and fixed-term contract supervisor — alexandru.takacs@laas.fr · +33 561 336 857