

# Lucien Gheerbrant

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## Career Objective

Final-semester M.Eng. student completing an international dual degree in computer science, electronics, and telecommunications. Seeking a graduate role or internship to leverage 10 months of experience, including modelling a custom RISC-V microcontroller during a CPU architecture engineering internship. Developed leadership, communication, and planning skills through leading role in a student art association.

## Education

### Master of Engineering

UNIVERSITY OF TECHNOLOGY SYDNEY

Aug 2024- May 2025

Sydney, Australia

- Majoring in Telecommunications and Electronics
- Dual degree with a focus on managerial and professional engineering knowledge

4G/5G Mobile Technologies   Electronic Components and Fabrication   Risk Management

### Master of Engineering

ÉCOLE DES MINES DE SAINT-ÉTIENNE

Sep 2022 - May 2025

Gardanne, France

- Majoring in Microelectronics and Computer Science
- Highly selective, esteemed and historical engineering institution in France

Machine Learning   Microcontroller Systems   CPU Architecture   Semiconductor Physics

### Bachelor of Engineering

LYCÉE [REDACTED]

Sep 2019 - Jun 2022

[REDACTED], France

- Undergraduate courses in Mathematics, Physics, Chemistry, Engineering Sciences

Self Confidence   Stress Management   Resilience   Thinking & problem-solving skills

## Technical Skills

|             |  |
|-------------|--|
| Languages   | English (C1), French (Native)  |
| Programming | C/C++, embedded C, Python, OoP, MATLAB, TensorFlow, bash   |
| Software    | Linux, git, CI/CD, gem5, VSCode, Podman, Docker, S-Edit, L-Edit, MPLAB, STM32CubeIDE, TrueStudio, Proteus, LabVIEW, Keil, ModelSim |
| Hardware    | SystemVerilog, gem5, PIC18, STM32, I2C, ARM-Cortex, Wi-Fi, Bluetooth, LoRa, 4G/5G, 8051, RISC-V, oscilloscope                      |

## Professional Experience

### Digital Systems Simulation Engineering Intern (full-time)

PROPHESSEE

Mar 2024 - Aug 2024

Paris, France

- Modeled and developed a RISC-V-based embedded system within 4 months using a discrete-event computer architecture simulator, integrating it with an event-based camera system for more efficient testing
- Achieved a 1:25 simulation-to-real-time ratio, reducing time spent on testing
- Optimised easier further development for engineers without access to a RISC-V board, streamlining integration and testing phases

C++   Python   gem5   RISC-V   Object-Oriented Programming   SystemVerilog   git

### Validation Engineering Intern

MICROCHIP TECHNOLOGY INC

Jan 2023

Rousset, France

- Developed Python and Bash scripts to automate tasks within validation department, increasing productivity
- Established communication between a work computer and an embedded Linux-based micro-controller using SSH and I2C protocols for seamless data exchange during validation procedures with a latency of 5ms
- Implemented automated data readings by establishing communication between a multi-meter and a work computer using Python scripts, enhancing efficiency and accuracy

Python   Bash   Multimeter   Oscilloscope   Embedded Systems   Embedded Linux   I2C/TWI   git

Projects

Development of a motorized robot with IR and ultrasonic sensors using a STM32 microcontroller

Mar 2024 – Apr 2024  
École des Mines de Saint-Étienne

- AUTO-PARKING FLEET OF ON-WHEEL ROBOTS
- Implemented an auto-park function for a fleet of robots, via robot-to-robot Zigbee communication
  - Developed firmware for a STM32 microcontroller within 3 weeks, including extensive research and study of a datasheet, allowing a fleet of 10 robots to be automated
  - Gained knowledge in embedded C programming, and use of STM32CubeIDE
- Embedded CBluetoothZigbeeSTM32STM32CubeIDE

Modeling of an ASCON-128 encryption system

Oct 2023 - Nov 2023  
École des Mines de Saint-Étienne

- DESIGN OF A DIGITAL SYSTEM IN SYSTEMVERILOG
- Utilised SystemVerilog to create and validate module with test benches, integrating a finite-state machine for encryption within 2 months
  - Tested and verified signal processing with ModelSim software for machine containing 20+ states
- SystemVerilogDigital DesignHDLEncryptionModelSim

Extracurricular Involvements

Vice President

Mar 2023 - Mar 2024  
Gardanne, France

- Organised a student organisation promoting cultural awareness by organising various artistic events for 50+ members
  - Collaborated with 7 other executive board members to provide strategic leadership, establish goals, and allocate resources
- Event PlanningManagementResponsibility TakingTeamworkCommunication

Volunteer

Mar 2023 - Jun 2023  
France

- Volunteered in association providing assistance to 30+ people in precarious situations
- Organised and facilitated weekly computer classes for vulnerable persons
- Taught beneficiaries essential digital skills such as email communication, web browsing, and office software usage

Referees

Available upon request

Personal information

- Hobbies
- ☐

Drawing, Animation, Cooking, Fitness, Fashion
- ☒

Holder of a Full Driver's License
- ☐

luciengheerbrant.com

