

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 Aug 2024- May 2025
University of Technology Sydney 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 Sep 2022 - May 2025
École des Mines de Saint-Étienne 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 Sep 2019 - Jun 2022
Lycée [REDACTED] [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) Mar 2024 - Aug 2024
[REDACTED] 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 Jan 2023
[REDACTED] [REDACTED], 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 microcontroller 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 C Bluetooth Zigbee STM32 STM32CubeIDE

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

SystemVerilog Digital Design HDL Encryption ModelSim

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 Planning Management Responsibility Taking Teamwork Communication

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

