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

• Majoring in Telecommunications and Electronics

· Dual degree with a focus on managerial and professional engineering knowledge

Master of Engineering

ÉCOLE DES MINES DE SAINT-ÉTIENNE

• 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

• 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)

PROPHESEE

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

· 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

Aug 2024- May 2025

Sydney, Australia

Sep 2022 - May 2025

Gardanne, France

Sep 2019 - Jun 2022

France

Mar 2024 - Aug 2024

Paris, France

7an 2023

Lucien Gheerbrant Resume

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

Molder of a Full Driver's License

Ö luciengheerbrant.com

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