Michael Lo Russo

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Career Summary

Engineering student specialising in Mechatronics, with hands-on experience in control systems, mechanical design, and embedded programming. Proficient in C/C++, Python, and CAD tools. Strong team player with a history of applying engineering skills to real-world challenges, including hands-on involvement in building a house. Committed to continuous learning and practical problem-solving.

Visit my website for more details on my projects: mlorusso.com

Education

University of New South Wales — Kensington, Sydney
Bachelor of Engineering (Honours) - Robotics and Mechatronics — Feb 2022 – May 2026

Technical Skills

Programming Languages: C, C++, Python, Java, MATLAB, VHDL, MIPS Assembly, LaTeX
CAD & Design Software: SolidWorks, Fusion 360, Bambu Studio, MakerWorld
Developer Tools Tools: VS Code, Visual Studio 2022, Arduino IDE, Anaconda, Jupyter Notebook
Cloud & Productivity Tools: Git, Google Cloud Platform, Microsoft Office Suite (Word, Excel, PowerPoint, Outlook)

Projects

Micromouse Maze Navigation Robot (MTRN3100) | *C++, Python* — May 2024 – August 2024

- Developed and implemented a Micromouse robot for autonomous maze navigation using onboard sensors (LiDAR, IMU, and wheel encoders), path planning, and PID control.
- Employed computer vision to generate occupancy maps and applied Breadth-First Search (BFS) to determine optimal paths for obstacle avoidance.
- Added manual override functionality via user-defined input sequences (e.g., f, l, r) for directional control.
- Engineered software on an Arduino Nano using Python and OpenCV for dynamic path planning in real time.

Custom Cooling Funnels for PC Hardware | *3D Printing* — Aug 2024 – Jan 2025

- Designed and 3D-printed cooling funnels using ABS material to direct airflow for CPU and GPU components.
- Reduced operating temperatures by 7°C under full load by simulating direct automotive cooling systems.
- Utilized Fusion360 for design, created drafts in Bambu Studio, and executed precise 3D printing.

Digital Circuit Design for Weight Comparison (ELEC2141) | *VHDL Xilinx* — Feb 2024 – Apr 2024

- Designed and implemented a digital circuit for weight comparison using 8-bit unsigned numbers.
- Utilized VHDL to test the design and conducted extensive simulations to ensure functionality and error detection.
- Developed a load checker to identify and signal errors based on load discrepancies.

Construction | *Self-Employed* — Jan 2022 – April 2025

- Partnered with my father to design, construct, and maintain residential buildings.
- Performed a wide range of basic construction tasks, including framing, roofing, plumbing, and electrical work.
- Coordinated project maintenance and repairs, ensuring long-term functionality and compliance with regulations.

Experience

Samsung Electronics — Jan 2023 – Present
Product Specialist and Sales Member

- Troubleshot and resolved technical issues for Samsung devices while maintaining an NPS rating of 80% or above.

- Provided front-line customer and technical support for Samsung electronics across mobile and smart device ranges, resolving inquiries via phone, email, and in-store engagement.
- Delivered clear technical communication and exceptional support to both technical and non-technical audiences, accelerating problem resolution.
- Conducted weekly training on end-of-day/start-of-day procedures and customer service excellence, significantly boosting operational efficiency.
- Processed orders, logged customer interactions, and managed after-sales issues using internal CRM and inventory systems.

Brand Influence Group (BIG) Feb 2022 – Jan 2023

Merchandiser

- Developed and executed strategic plans to enhance product presentation and boost sales, achieving a 12% overall increase.
- Built strong relationships with store management to align operational strategies.
- Managed inventory with high accuracy to ensure optimal product placement.

PCByte Auburn Jun 2021 – Mar 2022

Computer Assembly Technician

- Assembled custom computers and installed diverse hardware components.
- Possessed a strong understanding of computer architecture and various applications.
- Conducted thorough testing and debugging of assembled devices to ensure proper functionality.

Volunteering

WILL2LIVE May 2018

Volunteer

- Provided support to homeless individuals by assisting with meal preparation, serving food, and organizing clothing donations.

References

Available upon request