

William Hicklin

LEAD SOFTWARE ENGINEER · SYSTEMS DEVELOPER



9th March 1989



(+44) 07542314934



resume@hicklin.mt



hicklin



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Professional Summary

Senior software engineer with 8+ years of experience specialising in highly reliable systems software using modern C++, Go and Rust. Proven ability to lead projects in embedded Linux and robotics environments, from architecture to real-world deployment. Passionate open-source contributor with a focus on advancing memory-safe programming practices in Rust.

Experience

Lead Software Engineer

Bristol, UK

DYSON

Apr 2024 - Present

Leading embedded software development for connected devices, focusing on Matter protocol implementation and Rust adoption.

- **Rust Adoption:** Initiated and led the adoption of Rust for production systems, developing core libraries and contributing to key open-source projects including `embassy-rs/trouble` and `rs-matter`.
- **Matter Protocol Development:** Led development of core software components for a global IoT ecosystem (Matter), delivering specifications, test plans, and implementation code in C++.
- **Open-Source Initiative:** Secured official approval for open-source software contributions and established new internal workflows, creating practical guides for engineers to contribute to open-source projects.

Senior Embedded Software Engineer

Bristol, UK

DYSON

Feb 2020 - Apr 2024

Worked on a rapid prototyping team, delivering innovative prototypes and building platforms to accelerate development.

- Led Matter standard implementation efforts, collaborating with engineers across organisations to define specifications and implement new clusters for various device types.
- Designed and implemented embedded hardware and software solutions, including PCBs, back-end software, and embedded UIs.
- Built and maintained a custom OS using Yocto framework, creating tools for internal and external teams.
- Mentored junior team members and led technical aspects of various projects.
- Developed containerised applications and drivers for rapid prototyping platform.

Systems Developer

Tewkesbury, UK

AIR MONITORS LIMITED

Feb 2018 - Jan 2020

Led the development of an industrial embedded Linux data-logger for collecting data from air quality instruments.

- Designed and built hardware, developed testing applications, and implemented core software in C++.
- Created a custom OS with cross-compilers and an update server, established cloud infrastructure, and developed a web interface.
- Introduced and managed DevOps pipelines with comprehensive feature unit tests.
- Contributed to the Breathe London project with Google and Imperial College London, responsible for logging air quality and position data from mobile monitoring units.

Research Support Officer

Msida, Malta

UNIVERSITY OF MALTA

Jan 2015 - Feb 2018

Managed a Mobile Air Quality Lab, building systems to manage instruments and data while conducting research campaigns.

- Built online systems to manage instruments and their data using Python and Django.
- Created standard operating procedures for laboratory equipment.
- Performed equipment maintenance and repair.
- Designed and conducted measurement campaigns for air quality research.

Systems Developer (Contract)

Msida, Malta

UNIVERSITY OF MALTA

May 2014 - Nov 2015

Developed an energy-efficient data logger for a seismometer for an international ocean-bottom station project.

- Designed and implemented an embedded system for seismic data collection.
- Collaborated with international team of engineers in Palermo to integrate with the primary system.
- Optimised power consumption for long-term underwater deployment.

Skills

Spoken Languages English, Maltese

Languages C++, Go, Rust, Python

Systems Embedded Linux, Matter, Balena, Embedded Rust, Yocto, Embassy

Tools Altium Designer, PlantUML

Professional Development

Comprehensive Rust Training

FERROUS SYSTEMS

Jan 2024

Advanced C Programming

FEABHAS

AC-401

Feb 2022

Developing Embedded Systems with Yocto

DOULOS

Feb 2019

Education

University of Malta

Msida, Malta

M.Sc. IN PHYSICS (RESEARCH)

2012 - 2014

- Grade: Distinction
- Dissertation: "Investigations of VOCs in buildings close to service stations"

University of Malta

Msida, Malta

B.Sc. (HONOURS) IN CHEMISTRY AND PHYSICS

2008 - 2012

- Grade: Merit (Second Upper)
- Dissertation: "Construction and Characterisation of Dye-Sensitised Solar Cells: using natural dyes"

Professional Strengths

- Technical leadership and mentorship
- Cross-functional collaboration
- Detailed code review and documentation
- Problem-solving and innovation
- Continuous improvement mindset
- Open-source contribution and advocacy
- Strong analytical thinking and attention to detail