

# William Hicklin

LEAD SYSTEMS ENGINEER · PLATFORM ENGINEER



9th March 1989



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hicklin



William Hicklin

## Professional Summary

Versatile Senior Software Engineer with over 8 years of experience building robust back-end systems and data platforms for IoT and scientific applications. Proficient in Go, Python and Rust with a strong foundation in C++, Linux systems, and cloud infrastructure (GCP, MQTT). Proven ability to lead development lifecycles, from system architecture to deployment, and collaborate effectively across engineering disciplines.

## Experience

### Lead Systems Engineer

Bristol, UK

DYSON

Apr 2024 - Present

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

- **Tool building:** Designed and delivered tooling using Go and TypeScript to enable fast and robust real-world emulation of UI/UX designs from Figma.
- **Matter Protocol Development:** Led development of core software components for a global IoT ecosystem (Matter), delivering specifications, test plans, and implementation code in C++.
- **Rust Adoption Strategy:** Initiated efforts to promote Rust across the organisation, developed core libraries, created proof-of-concept examples, and contributed to open-source embedded Rust projects including `embassy-rs/trouble` and `rust-embedded/heapless`.

### Senior Systems Engineer

Bristol, UK

DYSON

Feb 2020 - Apr 2024

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

- Built and maintained modular libraries, frameworks and containerised applications enabling rapid delivery of projects.
- Designed and implemented full system solutions delivering high-fidelity prototypes.
- Led Matter standard implementation efforts, collaborating with engineers across organisations to define specifications and implement new clusters for various device types.
- Mentored junior team members and led technical aspects of various projects.

### Systems Developer

Tewkesbury, UK

AIR MONITORS LIMITED

Feb 2018 - Jan 2020

- Architected and deployed a scalable IoT data platform on Google Cloud Platform (GCP), using MQTT for data ingestion and MySQL for time-series data storage.
- Developed the full back-end infrastructure for a commercial air quality monitoring system, enabling real-time data collection, processing, and visualization.
- Designed and built a custom embedded Linux OS using Yocto, including a secure OTA update mechanism to manage a fleet of remote data-loggers.
- Led systems development for the high-profile Breathe London project, collaborating with Google and Imperial College London to deliver reliable mobile data collection systems.
- Introduced modern development practices, including unit testing and agile methodologies, improving project visibility and predictability for management.

### 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

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**Languages** Python, Go, Rust, SQL, C++

**Back-End & Cloud** Django, Google Cloud Platform (GCP), Docker, MQTT, MySQL, REST APIs

**Systems** Linux, Yocto, Balena, CI/CD

**tools** Git, Jira, PlantUML

## Professional Development

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### Comprehensive Rust Training

FERROUS SYSTEMS

Jan 2024

### Advanced C Programming

FEABHAS

AC-401

Feb 2022

### Developing Embedded Systems with Yocto

DOULOS

Feb 2019

## Education

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### 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

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- 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