William Hicklin

EMBEDDED ENGINEER · SYSTEMS DEVELOPER · RESEARCHER

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Experience

Lead Embedded Engineer
Bristol, UK

DYSON
Apr 2024 - Present

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

- **Matter Protocol Development:** Delivered the Service Area Cluster for Matter 1.4 specification and SDK, meeting all deadlines while producing comprehensive specifications, test plans, and implementation code.
- **Process Improvement:** Provided comprehensive feedback on the Matter development workflow, identifying pain points and proposing actionable solutions to technical leadership.
- **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.
- **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 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 2015 - Nov 2016

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, Docker, Balena, Embedded Rust, Yocto
Tools	Altium Designer, PlantUML

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
2012 - 2014

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

Professional Development

Comprehensive Rust Training

Ferrous Systems
Jan 2024

Advanced C Programming
AC-401

Feabhas
Feb 2022

Developing Embedded Systems with Yocto

DOULOS
Feb 2019