Lee Thompson

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Experience

Roles

Opteran / Research Engineer / Nov 2024–Present

- Contributed `sysfs`-based calibration and configuration system to existing Linux kernel module project.
- Developed ROS2 interface service layer for manipulating Video4Linux2 controls in C++.
- Lead engineer for Python-based full-system regression testing system.

Sitehop / Software Engineer / Jan 2024–Nov 2024

- Lead engineer on Linux-based host OS for SAFEblade 1100 management system from product inception to release.
- Developed hardware management interface in mixed C, Scheme and Node.js.
- Assisted port of legacy Ubuntu-based Xilinx Alveo system image to Buildroot.

Myenergi / Firmware Engineer / Oct 2022–Nov 2023

- Primarily worked on implementing pin code and RFID authorisation mechanisms on EVSE platform in C/C++ (bare-metal).
- Introduced prior expertise in test-driven-development and unit testing to existing and legacy codebase.
- Developed Python-driven hardware testing suite to assist core device firmware rewrite.
- Wrote and maintained Lua scripts to decode and analyse captured packet data using Wireshark.

Tracerco / Graduate Firmware Engineer / Dec 2021—Oct 2022

- Developed early-career professional skills, haptic and audio feedback for handheld devices and software teams for secure data transfer between handhelds and PC software.
- Assisted principle software engineers in design and refinement of a companion PC application for embedded handheld written in C#.
- Developed and debugged MISRA-C compliant firmware for an embedded RTOS handheld along with writing and maintaining accompanying documentation.

Skills

Bare-metal C (MISRA) | Linux Kernel C | C++ | Python | Bash
C# | Lisp | Javascript | Tcl | Assembly (x64 & ARM)
Verilog | VHDL | Vitis HLS | Rust

Linux Kernel & Userland | Ubuntu, Debian, Armbian
Buildroot | FreeRTOS | ROS2 | Video4Linux

Education

University of Lincoln / 2018–2021

- First Class BEng Electrical Engineering (Electronics)
- Dissertation: Implementation of Bayesian Networks on the Xilinx Zynq All-Programmable SoC

Caistor Grammar School

- A Levels: Physics, Maths, General Studies and Further Maths
- GCSEs: 11 A*–C incl. English & Maths

Interests

Open Source

Outside of professional settings I enjoy using Linux and Open-Source software as much as possible. I have contributed changes to Emacs and the Guix package manager. In my role at Sitehop I often walked other developers through contributing their bug-fixes for open-source code back upstream.

References

Available on request.