

Steve Revill | Contract Software Developer (Python, C, Embedded Linux)

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Nationality: British citizen

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Profile

I enjoy small, fast-moving teams and building well-engineered user-facing products. I have broad and pragmatic experience in C (embedded Linux, OS internals, real-time video, and connected devices) and Python (rapid prototyping, GUIs, integration, test automation, data pipelines, Flask). I have proven delivery from prototype to production, including OS and kernel-level work when required, and leading development of end-to-end, multi-tenant IoT platforms. My AI/CV/NLP experience is from personal projects rather than commercial. I have collaborated with organisations including Siemens, Arm, Sky, and Raspberry Pi.

Selected achievements

- Developed clean room prototype BBC BASIC interpreter in C (will ultimately replace a large AArch32 codebase).
- Ongoing open-source stewardship and engineering on RISC OS via RISC OS Open Limited.
- Authored the first iteration of the Linux DisplayLink driver, now in the Linux kernel.
- Contributed to a bespoke smart meter OS, shipped in over 20 million devices worldwide.
- Delivered embedded video proof of concepts for FFE's Fireray One and Talentum detectors, including a basic cloud platform and mobile app, on time for live demos at Intersec Dubai.
- Oversaw multiple EN, FM, and UL approvals and product launches for specialist fire detection devices sold globally to I&C customers.

Contracting experience

7th software Limited: Managing Director and Principal Engineer (Jul 2002 to present)

Trading entity for contract software development and technical project delivery. Available for new contracts. Recent projects include:

- **Back-end services and integrations:** REST/gRPC endpoints, streaming responses, resilient clients (*flask, grpc, requests, flask_cors, werkzeug*).
- **LLMs, STT and TTS (primarily self-directed):** Practical integrations for local/hosted LLMs, plus offline and streaming speech pipelines used for prototyping and internal tools (*transformers, llama_cpp, whisper, faster_whisper, edge_tts, pyttsx3, gtts*).
- **Computer vision and video processing:** Real-time analysis, frame-accurate edits and codec bridging (*cv2/OpenCV, mediapipe, ffmpeg, moviepy, av*).
- **Hardware, sensors and device I/O:** Protocol bring-up, binary packing and test harnesses for peripherals (*serial, bme680, struct, ctypes*).
- **Performance and acceleration:** Profiling, vectorisation and selective GPU offload (*numpy, pycuda, torch*).

Contract availability: On short notice. Trading via **7th software Ltd** (incorporated 2002).

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FFE Limited: Contract Engineer (Oct 2018 to Jan 2019)

Sole developer for two embedded video proof of concept designs integrated into fire detection hardware, plus a basic cloud backend and mobile app. Delivered on-time for Intersec Dubai demonstrations in January 2019.

Endurance Technology: Contract Software Engineer & Project Lead (Sep 2005 to Feb 2015)

A decade of end-to-end delivery across bids, requirements, implementation and integration for digital TV and broadband clients. Hands-on C and Python across embedded platforms, device drivers and video. Highlights include real-time video stream manipulation for Sky and the initial Linux DisplayLink driver. Contracting throughout this engagement.

Core skills

- **Languages:** Python, C, JavaScript (plus HTML & CSS), Arm assembly.
- **Platforms:** Desktop, Embedded Linux, OS internals and device drivers, Linux server administration.
- **Tools and VCS:** Git, Mercurial, Subversion, Jira, Cognidox, GitLab.
- **Domains:** IoT, consumer electronics, AI, real-time video, smart metering.
- **Practices:** Rapid prototyping, structured problem solving (8D, 5 Whys, PDCA), pragmatic delivery.

Additional professional experience

Although I am focusing on contract development, my background includes senior technical leadership roles, where I stayed close to all software and systems engineering work.

- **RISC OS Open Limited: Managing Director (Jun 2006 to present, not-for-profit):** Managing the open-source RISC OS platform and its developer community. Managing transition to 64-bit Arm architecture.
- **FFE Limited: Technical Director (Jan 2019 to Oct 2024):** Rebuilt engineering, test and compliance functions, and established a Test and Engineering Centre of Excellence in the Cambridge area. Continued involvement in embedded and product delivery.
- **Origami Energy: VP of Engineering (Feb 2015 to Oct 2018):** Co-developed the embedded software stack and built a multi-site engineering team to deliver the IoT software platform.
- **Castle Technology: Technical Project Manager (Jul 2002 to Sep 2005):** Software for consumer electronics and digital TV set-top boxes.
- **Acorn Computers / Element 14 / Pace Micro Technology: Software Engineer to Team Lead (Sep 1997 to Jul 2002):** Embedded, IPTV, and desktop operating system engineering including many contributions to RISC OS.

Education

BSc (Hons) Computation, University of Manchester.

Full UK driving license.

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