

Sam Protsenko

Senior Software Engineer

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Summary

Embedded software engineer with 15+ years of professional experience. For the last 10+ years have been contributing to open-source projects. Specialize in Linux kernel, bootloaders, firmware, and system level programming on ARM-based devices. Have 170+ patches accepted in the upstream Linux kernel, 250+ patches in U-Boot, and 500+ patches in open-source projects overall. Was a speaker at 10+ conferences worldwide. Have ~15,000 reputation on StackOverflow. A combination of hard skills in low-level programming, electronics, Linux ecosystem, and upstreaming enables me to solve complex cross-disciplinary tasks in the Embedded area.

Experience

12/2022– **Senior Software Engineer**, *Linaro*, Austin, TX, USA

- Present
 - Implemented and upstreamed kernel platform drivers for Exynos850
 - Enabled U-Boot support for E850-96 board and upstreamed it
 - Became a maintainer of Samsung drivers and Exynos850 SoC in U-Boot
 - Became a maintainer of Exynos850 SoC in upstream Linux kernel
 - Made major downstream Pixel 6 drivers functional in upstream kernel
 - Brought up U-Boot with XIP support on a novel chip with NV memory
 - Enabled EFI boot and ARM SystemReady for E850-96 board in U-Boot
 - Implemented Android OS boot using Android GBL from U-Boot on E850-96
 - Made Debian installation work on E850-96

07/2020– **Software Engineer**, *Linaro*, Kyiv, Ukraine

- 11/2022
 - Brought up a new devboard from square one to feature complete
 - Made the vendor kernel, bootloader, and Android fully functional
 - Found and fixed more than 30 hardware bugs during the bring up
 - Created device tree, the clock driver and other drivers from scratch
 - Upstreamed all essential platform support to the Linux kernel

05/2018– **Team Lead**, *GlobalLogic*, Kyiv, Ukraine

- 05/2020
 - Managed a small team working on Android OS and Linux kernel
 - Adopted VPN from upstream kernel in Android
 - Ported Android to a new board and upstreamed it
 - Implemented Android 10 boot sequence in U-Boot
 - Managed to run Android 10 with mainline kernel on BeagleBoard X15

02/2012– **Software Engineer**, *GlobalLogic*, Kyiv, Ukraine

- 05/2018
 - Supported Android kernel on Texas Instruments SoCs (OMAP4/5)
 - Implemented and maintained device drivers
 - Maintained the Android boot sequence code and fastboot in U-Boot
 - Implemented XIP boot from NOR flash (automotive)
 - Board bring ups, bug fixing, migrating to new kernel versions
 - System boot time optimizations (automotive)

09/2009– **Software Developer**, *AlterEGO*, Kramatorsk, Ukraine

- 01/2012
 - Implementing cross-platform applications in C++/Qt

Education

- 09/2008– **Master of Science in Computer Aided Engineering**,
06/2009 *Donbass State Engineering Academy*, Kramatorsk, Ukraine
- 09/2004– **Bachelor of Science in Computer Engineering Technology**,
06/2008 *Donbass State Engineering Academy*, Kramatorsk, Ukraine

Personal Projects

- 01/2019– **Linux Kernel Course**
01/2020 Created and taught the Embedded Linux kernel course
- 11/2018– **Traffic Light System**
01/2019 Designed and built a traffic light system (hardware and software) for an automotive hackathon
- 01/2012– **Debian Maintainer**
04/2020 Created and maintained a Debian package for "INSTEAD" game engine

Skills

- Projects Linux kernel, U-Boot, Android, Debian, BusyBox
- Components ARM, device drivers, device tree, bootloaders, upstreaming
- Languages C, C++, ARM assembler, Bash
- Electronics Soldering, hardware debugging, designing circuits and PCBs

Languages

- English Professional working proficiency
- Ukrainian Native or bilingual proficiency
- Russian Native or bilingual proficiency