

Alexandru Ardelean

Embedded SW/Linux Kernel Engineer

Contact details

Email: alex@shruggie.ro

Phone: +40745307413

Location: Cluj-Napoca

About Me

Embedded software developer, primarily skilled in C, shell, some Python, some automation, and some various other topics. Contributor to various open-source projects (Linux kernel, OpenWrt, and other).

Github profile: <https://github.com/commodo/>

Linux kernel contributions: roughly 430+ authored (with various email addresses)

- <https://github.com/torvalds/linux/commits?author=commodo> or
- `git log --oneline --author="Alexandru Ardelean" | wc -l`

More recently, I started doing Computer Vision with AI model training (YOLO, HRnet) and getting them to work on embedded devices.

Skill sets

C	15+ years	Python	4+ years
Embedded Development	15+ years	Linux	7+ years
C++	5+ years	Drivers	7+ years
Shell/Bash	7+ years	DevOps/CI Automation/Tooling	4+ years
Yocto	4+ years	Buildroot	5+ years
Computer Vision, AI Model Training AI Model Inference YOLO, HRnet	1+ years		

Professional Experience

May 2022 - Present

Contractor for Embedded/Linux projects

Role: `_(\ツ)_`

Company: Shruggie

Location: Cluj-Napoca

Clients I've had along this trip:

- MXT Creation – Create BSPs for Renesas RZ/V DRP AI SoC families (RZV2L, RZV2M(A))
- MXT Creation – Train and deploy AI Computer Vision models on Renesas RZ/V DRP AI SoC families
- STIHL: features and performance improvements for the iMOW (lawn-mower robot) launched in 2023
- Ateame: rework of a TS muxer library for a HW video encoder
- Allegro DVT (through Deviqon Labs): continue work on emulator for HW IP designs
- BrightGrove (consultancy group): develop platform for a new line of smart TVs (for a customer of BrightGrove)
- MathWorks (makers of Matlab/Simulink): kernel support for RF applications

**March 2021 -
February 2023**

Deviqon Labs

Role: Senior Software Engineer

Location: Cluj-Napoca

Write software aimed at services for the streaming & television industry

Clients:

- Ateame (acquired Anevia): create and extend software for video/audio/TV streaming and DRM
- Allegro DVT: create emulator for a HW IP designs (for video decoders)

**December 2017 -
February 2021**

Analog Devices Gmbh

Role: Linux Kernel Engineer

Location: Cluj-Napoca

Role includes:

- Work on Linux kernel drivers for Analog Devices parts (ADCs, DACs, accelerometers, IMUs)
- Work and enhancements (to the Linux kernel) to better support Analog Devices parts
- Continuously interact with Linux kernel community by submitting changes to the Linux kernel
- Internal code review for new changes being added to the Analog Devices kernel repository

Boards/carriers used:

- Xilinx Zynq 7 series: ZedBoard, ZC706, ZC702
- Xilinx ZynqMP series: ZCU102, ZU11EG
- Intel/Altera Arria10 SoC

Links:

<https://github.com/analogdevicesinc/linux/commits?author=commodo>

<https://patchwork.kernel.org/project/linux-iiio/list/?submitter=178229>

2016 - 2022

Co-maintainer of the mstpd package

Role: Co-maintainer

Location: [Github](#)

Co-maintain the mstpd package/code-base (Multiple Spanning Tree Daemon) with other developers

<https://github.com/mstpd/mstpd/commits?author=commodo>

2014 - Present

Open-source contributor to OpenWrt

Role: contributor

Location: [Github](#) / git.openwrt.org

OpenWrt is an embedded Linux distribution for routers.

Contributor of various patches to core OpenWrt.

<https://github.com/openwrt/openwrt/commits?author=commodo>

Maintainer of a few packages in the packages feed:

<https://github.com/openwrt/packages/commits?author=commodo>

**January 2014 -
December 2017**

Ocedo / Riverbed Technology

Role: Embedded Software Engineer

Location: Cluj-Napoca

[Riverbed](#) acquired Ocedo (which was a small networking startup based in Karlsruhe Germany).

Develop and maintain software modules and drivers for network gateways, switches and access-points.

- Integration of 3G/4G connectivity in gateways
- Integration of Spanning Tree (STP) and Link-Layer Discovery (LLDP) protocols in switches
- Support for some Broadcom switch chips
- Internal code reviews

April 2013 - January 2014

Betfair.com

Role: DevOps for internal tooling

Location: Cluj-Napoca

Maintenance & support for internal tools: Gitlab, Perforce, SVN, Jenkins, Atlassian (Confluence, JIRA, Fisheye), Fortify.

Automation of deployment processes using various tools (Jenkins CI, Chef, Puppet).

**November 2012 -
April 2013**

EBS Romania (currently NTT Romania)

Role: Embedded Software Engineer for Automotive

Location: Cluj-Napoca

Develop SW & documentation for Continental Automotive for various work on instrumentation clusters.

**August 2011 -
November 2012**

NSpyre Romania (currently Capgemini Romania)

Role: Software Engineer

Location: Cluj-Napoca

Write software modules & documentation for controlling highly complex industrial machines, for ASML (<https://www.asml.com/en>)

March 2007 - August 2011 National Instruments Romania

Role: Software Engineer

Location: Cluj-Napoca

- Primarily worked on Pharlap (RTOS)
- Write drivers for ethernet cards for PXI products for the Pharlap OS
- Develop & maintain the TCP/IP stack on the Pharlap
- Add advanced debugging features to Pharlap OS to better debug network issues
- Maintain LabVIEW network primitives across Windows, MacOS, Linux, Pharlap and VxWorks operating systems

Education

2003 - 2008

Technical University of Cluj-Napoca

Computer Science Department (English Section)

1999 - 2003

“Mihai Eminescu” High School - Satu Mare

Mathematics and Informatics (English Section)