Andrej Shadura

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Skills

Linux
I started using Linux in 2004 with ALT Linux, switched to Debian two years later, and have been using Linux exclusively since 2007. In 2008, I started contributing to Debian by reporting bugs, providing patches, becoming a package maintainer later on. I was accepted as a Debian Developer in March 2013, and have since been maintaining or co-maintaining a couple dozen of packages, including core packages e.g. *ifupdown*, *dash* and *wpa*. I have also contributed a few patches to the Linux kernel.

Embedded development
I participated in development of many embedded devices, based mostly on very limited hardware platforms. Work on those projects required me to become familiar with an oscilloscope and logic analysers, and to learn how to anasyle and troubleshoot hardware issues. Badly documented chips sometimes demanded certain research work to be done in order to determine how to program them properly. I have good knowledge of processor architectures (most notably, Intel x86 and 8051, AVR) in this area, and have some practice developing for CPLD and FPGA in VHDL.

C
I have strong C skills, and have a lot of experience in programming using it on multiple platforms. I have good knowledge of C99 standard and best programming practices.

Python
Since I began my involvement with Mercurial and Kallithea in 2014, I gained a lot of experience with Python, both version 2 and 3. Having completed a few projects of my own in Python, it gradually became my scripting language of choice, which I use at work and for my hobby projects.

Display systems
During my work at BelDisplayTech, I've gained deep knowledge of analogue and digital video standards: PAL and NTSC, LVDS and TMDS, and have experience using video processing chips of Analog Devices, Philips/NXP, TechWell and Realtek.

Communications and networking
I have good understanding of various communication protocols, from I^2C and SPI through RS-232 and RS-485 to complex ones like USB. I also have good experience working with networks, from Ethernet MAC level to application-level protocols, and have written implementations of protocols like FTP and HTTP. Additionally, I'm familiar with the newest generation of Internet protocols, IPv6, and have successfully deployed it at a couple of networks.

UNIX tools
Since I've used and developed on Linux for a long time, my knowledge of UNIX environment is strong, and I'm an expert in using tools like make, shell, awk, m4. I'm an experienced user of version control systems: Git, Mercurial, CVS and Subversion.

Remote work
I've been part of world-wide distributed projects such as Debian for long time, so I'm quite used to working together towards common goals while being dispersed all around the world and communicating by the means of email and chat. Since I joined Collabora in 2015, I've been working fully-remote, and this helped me develop self-discipline necessary to do the remote work effectively.

Employment history

Collabora Limited *Remotely from* **Bratislava, Slovakia**

Consultant Software Engineer *July 2015–present*

Since I joined Collabora, I have worked with a variety of system-level Linux tools and distribution-building frameworks, such as Yocto/OpenEmbedded, Linaro image tools, Open Build System and others. At the moment, I am responsible for build and integration of a Debian derivative, Apertis. In this rôle, among other things, I took charge of porting automated tests to LAVA 2 and further integration of the CI loop with the bug tracker.

Alcatel-Lucent Slovakia, a.s. **Bratislava, Slovakia**

Software Engineer *Feb 2014–May 2015*

At Alcatel-Lucent, I worked on an implementation of call tracing code of an LTE mobile gateway firmware in C. I was solely responsible for the implementation of a cache of user identifiers. My focus later moved onto the integration of a debug tool into the code across all modules. I had to be in touch with developers from various teams to make sure they benefit from the newly integrated debug code.

REC Slovakia, s.r.o. **Žilina, Slovakia**

Software Engineer *Jan 2013–Dec 2013*

I worked as subcontractor for NXP Semiconductors and a few other customers, as well as on internal projects.
As part of my duties, I helped porting BSP from a proprietary compiler to GCC, cross-compiling software for Raspbian/armhf, and developing firmware for smart cards. The latter was done as a part of NXP Semiconductors project, JavaCard Open Platform.
At NXP, implemented a subset of JCOP API in the smart card firmware, adjusted existing implementation to strictly meet the specification requirements, refactored code to reach maximum ISO C and MISRA C compliance. I worked in a small team of engineers within a bigger customer's team with frequent communication with the rest of the project distributed across the customer's sites.

EDM, s.r.o. **Nižná, Slovakia**

Software Designer *Nov 2011–Dec 2012*

I took charge in developing firmware for a book binding machine for a foreign customer. I contributed some key work in re-architecture of the firmware's design to make it flexible and adaptive to changing hardware parameters, and later have worked on implementing customer's requirements. I worked in a small team of developers, and had to constantly communicate with mechanical engineers and perform tests on real hardware. As a part of job, I've created a C framework aimed at making it easier to develop real-time applications with STM32's Cortex-M3 processors.
A part of my job was also to maintain a Debian GNU/Linux-based server.
As a personal achievement, I managed to convince colleagues to abandon Subversion VCS for most uses, and to switch to Mercurial, which helped us to improve our workflows significantly.

Belarusian State University of Informatics and Radioelectronics **Minsk, Belarus**

Teaching Assistant *Sep 2009–Jul 2011*

I've been teaching students the basics of network technologies (OSI model, TCP/IP stack, IPv6), system administration, digital schematics and computer architecture. As part of my work at the Computers Department of the university, I've deployed IPv6 at the department's local network. Also, I participated in the development and support of the on-line students evaluation system, and administered a Debian GNU/Linux server used for that purpose.
This job has helped me to improve my communication skills, and taught me how to effectively transfer knowledge to the others.

BelDisplayTech, Ltd **Minsk, Belarus**

Software Developer *2007–Oct 2011*

I was involved in embedded development with devices based on the AVR and 8051 processor families. These devices were mostly display systems: display controllers, display backlight controllers, image processing devices. A few projects involved working with embedded Linux on MIPS and ARM and required knowledge or OpenEmbedded and Emdebian. Most of our devices shipped with end-user graphical front-ends; to write them, I had to learn how to use GTK and Tcl/Tk. As a side job, I also administered a local Debian GNU/Linux server and our LAN infrastructure.

New Analytical Systems, Ltd **Minsk, Belarus**

Software Developer *Nov 2005–May 2007*

I've worked at NAS Ltd part-time during my university studies. I helped integrating chromatographic software with customers' systems, and gained some experience working with SQL. Later I started working on the application core, and helped developing cross-platform GUI widgets in Object Pascal (targeting Delphi, Kylix and Free Pascal).

Freelance activities

In 2018–2020, I developed a well-selling open source Android application, *Receipt Printer Driver*, in Kotlin. I learnt a lot about Android application development, gained valuable skills in Kotlin and earned money on the application while keeping the code free.
Another side activity I perform is helping the Bratislava public transport company (DPB) communicate with their passengers in English. My job is to write and proof-read translations of diversion notices and other announcements.

Languages

Belarusian: Native bilingual
Russian: Native bilingual
English: Advanced
Slovak: Near-native
German: Basic
Hungarian: Beginner

Education

Belarusian State University of Informatics and Radioelectronics **Minsk, Belarus**
Master's degree, Computer science *2009–2010*

Belarusian State University of Informatics and Radioelectronics **Minsk, Belarus**
Engineer, Computers Machines, Networks and Systems *2004–2009*
Subjects included basics of analogue and digital electronics, computer architecture, cryptography, OS architecture, computer networks and distributed systems.
Graduation project involved the development of firmware for FPGA-based controller of dynamic backlight for an LCD, using VHDL.

Miscellaneous

I have participated in the Google Summer of Code programme twice as a student, in 2008 (for Audacious) and in 2010 (for Tcl/Tk), and twice as a mentor, in 2019 and 2020 (for Debian).
I'm an everyday cyclist (think *fietser*, not *wielrenner*) and an OpenStreetMap contributor.
I've been a member of a number of organisations promoting cycling and mobility in cities (Minsk Cycling Community, Mulica, Cyklokoalícia).
A detailed list of projects I have participated in is available on request.