Aleksandr Mezin

Software Engineer

mezin.alexander@gmail.com | https://github.com/amezin/ | https://www.linkedin.com/in/alexandermezin/

https://profiles.topcoder.com/Sanya_M | https://codeforces.com/profile/Sanya_M

Work Experience

Software Engineer at Plesk (WebPros Bulgaria EOOD: February 2023 - Present, Plesk International GmbH: October 2022 - February 2023, Plesk Ru LLC: August - September 2022)

Unix/Linux Backend (OS-specific components) developer.

- Implemented automatic 3rd party component/dependency updates using Renovate: adapted Renovate to our infrastructure and workflow, fixed compatibility bugs, implemented missing features, contributed most of these changes back to the open source project.
- Identifying, isolating, and fixing product bugs (C/C++, Python, sometimes PHP, Perl).
- Implementing and fixing Jenkins pipelines.

Software Developer at Kaspersky Lab (August 2021 – August 2022)

In KasperskyOS Thin Client team/project:

- Developed, fixed and optimized CMake-based build scripts and Makefiles, CI pipelines.
- Wrote a fuzzing test for a popular open source library, that uncovered a few new bugs (C).
- Ordinary bug fixing and feature work (C/C++).

Software Engineer at Ivideon (October 2018 – July 2020)

Developed and maintained:

- Utilities and scripts for building Debian/Ubuntu packages (Python).
- Jenkins pipelines for automated builds, tests, and deployment (Groovy); a custom Jenkins VCS plugin; fixed issues in a few popular Jenkins plugins (Java).
- Various testing, deployment and monitoring tools (Python).

Software Engineer at GreatFruit (February 2016 – August 2018)

- Modified Android 4.2 and 6.0 (Android-specific virtual device drivers/kernel modules, userspace services, libraries, and frameworks) to run in LXC containers (C, C++, Java) on Amazon EC2 instances - from planning and research to a working prototype in 3 months.
- Backported changes from newer Android and Linux Kernel versions (C, C++).
- Implemented low-latency video (screen capture) and audio streaming (C, C++, GStreamer).
- Implemented virtual camera, audio HALs for Android (C++).
- Wrote and fixed/improved lots of build scripts (Android.mk/Makefile, CMake).

Software Engineer at Crystalnix (February 2014 – February 2016)

- Worked on a spam filtering server (Linux, C++, Boost.ASIO, CMake) – build scripts, optimizations in networking code.
- Implemented a desktop shell for a web application for multiple OSes (Windows, Linux, macOS; Qt, C++, a bit of Objective C) with deep integration with desktop environments, installers for every platform.
- Participated in development of POS software (Windows, C++, Qt, QML, CMake) – data synchronization with a remote server, communication with peripheral devices, build scripts.
- Implemented custom DNS caching in a Chromium-based browser, tied to customer's (ISP) infrastructure.
- Implemented a GUI utility for batch processing of archives in multiple formats (Linux, GTK, Python).

Education

Novosibirsk State University, Bachelor of Engineering and Technology in Computer Science and Computer Facilities (September 2008 – August 2013)

Participated in ACM ICPC 2010-2011, 2011-2012 NEERC semifinals (Novosibirsk SU 2 team), and other programming contests. Successfully completed Google Summer of Code 2013 (KDE).

Omsk State University, Master's degree in Computer Science and Computer Facilities (September 2013 – August 2015)

Participated in ACM ICPC NEERC semifinal 2013-2014 (Omsk SU 2 team) and other programming contests. Successfully completed Google Summer of Code 2015 (KDE).

Pet Projects

- Reverse-engineered Linux HWMON driver for NZXT RGB & Fan Controller, included in Linux kernel since 5.17
- Drop-Down Terminal Extension for GNOME Shell (JavaScript, Gtk, Python)
- Visual Studio Code project generator for Linux kernel and modules

Contributions to Open Source Projects

Renovate (TypeScript)

Extraction of versions/updates from HTML pages, Various small fixes and improvements.

Linux Kernel (C)

Reverse-engineered Linux HWMON driver for NZXT RGB & Fan Controller, workarounds for hardware/firmware bugs in ACPI AC and battery drivers.

pytest-xdist (Python)

Work-stealing scheduler, tweaks for the default `load` scheduler, bug fixes.

KDE (C++, Qt)

Touchpad settings module; bug fixes in KDevelop and PowerDevil; game compatibility improvements in KWin.

GNOME (C)

GLib - clang-cl, Windows compatibility improvements, bug fixes, Mutter - bug fixes.

LXC (C, Python)

Fixes for Android containers, improvements in Python bindings that allowed building and packaging them separately

Also contributed to:

wayland, laptop-mode-tools, Homebrew, Guake, Jenkins plugins (Telegram Notifications, Categorized View), OpenWRT (core, packages), dbus-rs, vagrant-libvirt, docker-compose, CMake, Meson, OpenRC, libepoxy, libxcb, ...