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👋 Hello there! I'm Alexey and I started my software engineering journey more than 20 years ago. The selected greatest and craziest adventures thus far are:

- expanding the media tech frontier at Verizon Media / Yahoo Ryot Lab by building PlayAR, Yahoo Immersive, and internal cloud rendering cluster with Unreal Engine with Pixel Streaming, SideFX Houdini, Adobe AfterEffects and Remotion;
- building a software agency that earned a 2020 recognition award;
- contributing almost 100 Odoo Community modules that help operating hundreds of service companies and getting assignment to the project steering committees as a recognition;
- opening OsmAnd to the iOS market and 3D maps & cartography league by delivering a brand-new OpenGLES-based core that got me a Wikipedia mention as OsmAnd's developer;
- building an inertial motion capture system at Inertial Labs and contributing to the Linux Kernel to make it possible;
- expanding the AR/VR tech frontier at Innalabs with MEMS-based 6DOF "mouse", motion-capture VR training systems with stereo vision;
- authoring a MIPS III R5900-based "Emotion Engine" CPU emulator for the company's security research enabling it to detect and verify the signatures and watermarks on the bootloader.

My passion lies in the hands-on exploration of software engineering frontiers.

Top Skills   (Software Architecture) (Tech Leadership) (Software Engineering) (Research & Development)

Platforms: Linux • Embedded Linux • Android • iOS • Windows • MacOS • AWS • GCP • Docker • Kubernetes

Languages: C++ • Python • Java • Kotlin • JavaScript • TypeScript • Objective-C • Swift

Frameworks: Qt • Flask • Django • Android • iOS • Unreal Engine • React.js • React Native • Next.js • NestJS

Libraries & APIs: Standard Template Library (STL) • Boost • OpenGL • OpenGLES • Vulkan • Redux • Redux-Saga

Tools: Visual Studio • IntelliJ IDEA • GitHub • Jira • CMake • Bazel • Gradle • NPM

Paradigms: Reactive Programming • Object-Oriented Programming • Microservices • Serverless • CI/CD • IaC

Notable Open-Source Contributions

- PCRE4J – a Perl-compatible regular expressions for Java;
- Puppeteer-Capture – a pixel-perfect stream capture for Chromium;
- Linux Kernel – a 1MBaud+ serial port speed support for OMAP platform;
- Pylint – Implicit Namespace Packages (PEP 420) support;
- Google Yapf – fixes for lambdas, dictionaries and argument lists;
- Google Filament – GLTF extras support, build improvements;

- Apache Commons Collections – Cartesian product iterator;
- OCA's Project – project roles support and related modules;
- OCA's Timesheet – utilization analysis and report, granular billing control, timesheet approval strategies;
- OCA's Jira Connector – Tempo Timesheets support;
- OCA's HR – advanced accrual time-off module, multi-currency contracts;
- OCA's Bank Statements – online bank statements support for PayPal, Wise.com, Braintree, statements auto-split module, etc;

Recent Professional Experience

Senior Full-Stack Software Engineer
Yahoo! (Jan 2019 – Dec 2023)

Engineered immersive content production-to-presentation software serving millions of unique users daily.

Chief Technology Officer
Brainbean Apps (Mar 2015 – Dec 2018)

Scaled the company from a one-man-band startup to a team of 50 with a turnover of €1.6M.

Lead Mobile Software Engineer
OsmAnd (Nov 2012 – May 2015)

Paved the way to the iOS users, allowing the product to have an extra 240k MAU today.

Education @ Applied Mathematics faculty @ National Technical University of Ukraine "Kyiv Polytechnic Institute"

Master's degree in Specialized Computer Systems
(2009 – 2011)

Bachelor's degree in Computer Engineering
(2005 – 2009)