



# SERGII ZAITSEV

SOFTWARE DEVELOPER

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## WORK EXPERIENCE

### 2018 PLATFORM ENGINEER (GO/JAVA), SIXT

Worked on a platform for customer-facing distributed systems.

- Created a build system for Go micro services.
- Designed and developed a telemetry library.
- Designed and implemented a CI/CD pipeline.

### 2017-2018 SOFTWARE DEVELOPER (C/GO), CESANTA

Designed and developed software for embedded systems, connected devices and IoT.

- Implemented SOCKS5 TLS support in Mongoose framework.
- Developed Bluetooth-to-WiFi bridge firmware for ESP32.
- Designed, developed and deployed a platform for connected device management and OTA.
- Created a VSCode plugin for Mongoose OS development.

### 2009-2017 INDEPENDENT CONTRACTOR (C/GO/ANDROID)

Worked with EU- and US-based customers, offering services related to embedded and systems software design and development.

- Created firmware for embedded devices such as a streaming audio player/speaker (C/FreeRTOS/ARM).
- Designed, developed and deployed a number of Android applications based on the customer concepts (Java/C).
- Architected and developed Android software with necessary infrastructure such as RESTful web services that creates customizable panels and dashboards for different home automation platforms (Android, Java, Lua, Node.js, Mongo).
- Implemented a platform for managing and provisioning cable modems and CMTS (Go, SNMP, IPDR, TFTP, DOCSIS).

### 2011-2016 SOFTWARE ENGINEER (ANDROID/EMBEDDED/LINUX), LYNX INNOVATION

Worked with an international team of developers building software for retail displays and digital signage. Had great experience with a wide range of technologies from low-end MCUs to complex distributed web services.

- Developed reusable code libraries for common tasks on memory-constrained MCUs (file system drivers, peripherals HAL, multitasking, configuration handling).
- Created software and firmware for high quality digital audio headphone displays used by major brands in the headphone market.
- Developed Linux and Android based media players and tablets used for interactive shop retail displays used by major US retail chains.
- Designed and built a tool for generating android apps from hand-

drawn prototypes and pixel-perfect graphics.

- Customized Android firmware (AOSP) for retail needs.
- Created a web platform for real-time monitoring and managing of the connected retail displays. This included OTA or offline firmware and content updates, instant device health reports, remote troubleshooting and maintenance tools, and a scalable business-specific analytics engine (AWS, Go, MQTT).

#### 2008-2011 SOFTWARE DEVELOPER (LINUX), FABULATECH

Built a number of high-quality solutions for redirecting hardware over network and to the remote desktop sessions. Worked on all levels and aspects of the projects including research, design and specification, development, technical reviews and mentoring.

- Developed system software for Linux/Solaris/MacOS, including kernel drivers.
- Designed and implemented a tool for USB packet inspection for Linux/Solaris.
- Created a utility to generate self-contained installers for various Linux distributions.

#### 2007 SOFTWARE DEVELOPER (WINDOWS), IDEGROUP

Worked on Windows NT system services and kernel drivers, performed software development of a virtual USB host controller driver using Kernel Mode Driver Framework.

### SIDE PROJECTS

- ⇒ **jsmn**: world fastest JSON parser/tokenizer (ANSI C)
- ⇒ **partcl**: small TCL implementation for embedded systems (C99)
- ⇒ **webview**: lightweight Electron alternative (C/Go)
- ⇒ **glitch**: music programming language (C/Go)
- ⇒ **anvil**: fast UI framework in the spirit of ReactJS (Java/Android)

### EDUCATION

2013 Ph. D. in Artificial Intelligence, Kharkiv National University of Radioelectronics

2009 M. Sc. in Computer Science, Zaporizhzhya National Technical University

2008 B. Sc. in Computer Science, Zaporizhzhya National Technical University

### TECHNICAL SKILLS

C/C++, Go, Java/Kotlin, JavaScript, Python, Lua, Tcl, UNIX Shell.  
Linux, Android, RTOS (FreeRTOS, LK), baremetal (AVR, ARM).  
AWS, Docker, Node.js, REST, MongoDB, Redis, ReactJS/Mithril.js/Redux.