

VICTOR SHUTEMOV

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SUMMARY

Android Platform Engineer with 14+ years of hands-on experience across Android Automotive OS, mobile apps and core systems. Skilled in system-level development, emulator/virtualizations and HAL integration, and open-source contributions. Passionate about user experience, scalable architectures, development efficiency and open source.

TECHNICAL SKILLS

Languages: Kotlin, Java, C++, Python

Android: Android Open Source, Automotive, SystemUI, SELinux, Bluetooth, Custom Views, Sensors, Jetpack (room, compose, navigation, etc), JNI, HALs, Treble, NDK, HIDL, AIDL, Emulator

Tools & Frameworks: Soong, Gradle, Dagger2, Koin, JUnit, Mockito, Espresso, UIAutomator

Graphics & Games: OpenGL ES, GLSL, Blender 3D, GPU profiling

CI/CD & DevOps: Git, Gerrit, Jira, Buganizer, Gitlab CI

Networking & Data: Retrofit, Protocol Buffers, SQLite, Firebase, REST, SOAP, MySQL

RTOS and virtualization: QNX, QVM, Virtio, Qemu, CrosVM

EXPERIENCE

Platform Engineer

Haleytek AB, Gothenburg, Sweden | September 2021 - Present

Collaborated with Google on Android Automotive OS for Geely Group car brands:

- Led development of head unit (Android) emulator and ECU simulators for scalable dev/test environments
- Automated BSP integration flow and resolved boot and performance issues across the platform
- Advocated and enforced modular architecture to decouple hardware from software components
- Supported teams with best practices for working with core systems, reusability and virtualization
- Actively contributed to AOSP, Android emulator and other related open source projects

Tech: Android Automotive OS, Java, C++, Python, Soong, HIDL, AIDL, Vehicle HAL, Some/IP, Bluetooth, QNX, QEmu, CrosVM, Android Kernel (ACK, GKI).

Infotainment Platform Engineer

Volvo Cars Corporation, Gothenburg, Sweden | March 2020 - September 2021

Contributed to Android-based automotive infotainment system and tools:

- Enhanced existing automotive emulator with production-grade Vehicle HAL, Bluetooth and WiFi support, parking camera stack, enabling development and testing of HVAC, telephony, media, parking assist and vehicle functions in a virtual environment.
- Optimized emulator performance and achieved memory saving by 35%.
- Released first public automotive emulator for android studio.
- Pioneered modular architecture approach to promote code reuse across devices
- Developer of key components including multi-user support, settings, media, and UI frameworks extensions (chassis).

Tech: AOSP, Android Automotive, Java, C++, Kotlin, Python, Soong, Make, HIDL, Vehicle HAL, Agile, Scrum, Jira, Git, Gerrit, Buganizer, MVVM, TDD, JUnit, UIAutomator, Tradedef, CTS/VTS.

Senior Android Developer

CEVT AB, Gothenburg, Sweden | July 2018 – March 2020

Developed an Android-based infotainment system for Lynk & Co brand vehicles:

- Focus areas included FM/DAB, Bluetooth media/telephony, Android Auto and CarPlay, System UI, Launcher, Peer-to-Peer Car Sharing System (head unit app, mobile phone app, backend), Settings, and Vehicle functions control app
- Initiated and carried out the development of a custom Android emulator tailored for automotive use cases, including a vehicle data simulator to facilitate development and testing
- Proposed and implemented a hybrid approach to in-car radio for improved user experience

Tech: AOSP, Android System & Hidden APIs, Kotlin, Java, C++, Make, Vehicle HAL, Bluetooth Stack, Broadcast Radio, Jetpack, MVVM, MVP, SOLID, TDD, Dagger2, Koin, Retrofit, MariaDB, Spring Boot, UIAutomator, Espresso, JUnit, Mockito, Git, GitLab CI, Jira, Agile

Independent Mobile Games Developer

Kaliningrad, Russia | 2013 – 2017

Designed and developed a portable 3D game engine and released several game titles:

- Built and released multiple games based on the engine for Android, iOS, BlackBerry QNX, and Amazon Kindle platforms
- Focused on low latency rendering, memory footprint and portability
- Engineered custom rendering, animation, and asset management systems

Tech: OpenGL-ES 1.0, 2.0, C++, Java, GLSL, JNI, XCode, SQLite, Blender 3D (models, animation), python, Git, Inkscape, Android, iOS, debugging, CPU and GPU profiling, address sanitizing,

Mobile Applications Developer

Mobile Payment Systems Ltd., Moscow, Russia | 2011 – 2013

Developed mobile banking, payment, and e-commerce applications across multiple platforms including Android, iOS, Windows Mobile 6, and Windows Phone 7

- Designed and implemented several applications and features from the ground up, achieving high user adoption and top usage ratings
- Architected a SOAP-based backend API with industry grade security and implemented a lightweight gateway using Protocol Buffers for efficient mobile communication
- Pioneered user-facing features, such as barcode payments, and a pay phone widget

Tech: Java, Objective-C, C#, SOAP, Protocol Buffers, OpenSSL, Oracle DB, Tomcat, JBoss, Android, iOS, Visual Studio, Eclipse, SVN, Jira, Redmine

EDUCATION

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| 2007-2011 | Bachelor of Software Engineering,
<i>Moscow State University of Technology "Stankin", Moscow, Russia.</i> |
| 2004-2007 | Bachelor courses in Applied mathematics and computing,
<i>Chelyabinsk State University, Russia</i> |