

# VICTOR SHUTEMOV

SOFTWARE ENGINEER

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## SUMMARY

- 11+ years of diverse mobile software development experience, including Android Automotive OS, OpenGL-ES 3D game engine, finance/eshop apps and contributions to AOSP.
- Excellent knowledge of OOP principles, design patterns, data structures and algorithms.
- Extensive hands-on experience with the full software development life-cycle and design patterns.
- A self starter with great team working skills, passion for improvement and expanding boundaries.

## SKILLS

**Programming languages:** Java, C++, Kotlin, Python, shell.

**Android:** AOSP, make, soong, Android Automotive, Vehicle HAL, Android Emulator, Broadcast radio, Bluetooth, Custom Views, Widgets, Multi-threading, Lifecycle, SystemUI, Jetpack, Sensors, Media, Layouts, JNI, NDK, Room.

**Mobile graphics:** OpenGL-ES 2.0, GLSL, low poly modeling with Blender 3D.

**Debugging:** CPU and GPU profiling, ASAN, Memory leaks.

**DI and testing:** Dagger2, Koin, JUnit, gtest, Mockito, Espresso, UIAutomator.

**VCS and issue tracking:** Git, Gerrit, Github, Gitlab, Google Buganizer, Jira.

**Networking, DBMS and analytics:** TCP/IP, Sockets, HTTPS, Retrofit, REST, SOAP, protocol buffers, MySQL, MariaDB, SQLite, Firebase, Fabric, GPG Services, Admob.

## WORK EXPERIENCE

**Platform Developer**, HaleYTEK AB, Gothenburg, Sweden

September 2021 - Present

Working in a tight collaboration with Google building AOSP based infotainment platform, powering Geely group brands cars. Focus on developer support with tools, frameworks, and knowledge sharing.

- Providing an IHU emulator and ECU simulators as development/demo tools.
- Ensuring reusability, scalability and overall quality of product by enforcing an absence of vertical and horizontal coupling between components and between software components and hardware.
- Supporting DevOps teams needs with a virtual environment for running CI tests at a scale.
- Contributing to Android Open Source Project.

*AOSP, Android Automotive, Java, C++, Soong, HIDL, Vehicle HAL, Some/IP, Bluetooth, QEMU, Android Kernel, Agile, Scrum, Jira, Git, Gerrit, Open Source.*

**Infotainment Engineer**, Volvo Cars Corporation, Gothenburg, Sweden

March 2020 - September 2021

Contributed in collaboration with Google into building a complete AOSP based vehicle infotainment product. Areas of responsibility included personalization, settings, media, developer support with UI frameworks (chassis, and extensions), and automotive emulator.

- Enabled bluetooth/wifi passthrough dongle support for Android Q emulator.

- Reduced memory consumption of Android R automotive emulator by 35%.
- Integrated production VHAL with the emulator making it possible to work on vehicle functions.
- Participated in parking camera simulation, feeding static images or video records to EVS HAL.

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

## **Senior Android Developer**, CEVT AB, Gothenburg, Sweden

**July 2018 – March 2020**

- Participated in development of an Android-powered infotainment system for Lynk&Co brand cars, with focus on FM/DAB, BT functions of media center, projections (Android Auto, Carplay), customization of System UI and Launcher, Car Sharing (head unit and mobile phone apps, backend), Settings and Vehicle functions.
- Supported other developers by starting a customized Android emulator initiative for the project, creating a vehicle data simulation tool, and helping setting up CI/CD pipelines with the DevOps team.
- Introduced an idea and helped drive the development of an improved (hybrid) solution for in-car radio and implemented the application part of it.

*AOSP, Android System and Hidden APIs, Kotlin, Java, C++, Make, Vehicle HAL, BT stack, Broadcast Radio, Agile, Scrum, Jira, Git, Gitlab CI, MVVM, MVP, SOLID, TDD, Clean, JUnit, UIAutomator, Espresso, Jetpack, Dagger2, Koin, Mockito, Retrofit, MariaDB, Spring Boot.*

## **Independent Mobile Games Development**

**2013 – 2017**

Developed a cross-platform compact and optimized for speed 3D game engine using Java, C++/OpenGL-ES and made several games based on it for Android, iOS, Blackberry QNX and Amazon kindle platforms.

*OpenGL-ES 1.0, 2.0, C++, Java, GLSL, JNI, Blender 3D (models, animation), python, Git, Inkscape, Android, iOS, debugging, CPU and GPU profiling, memory leaks and footprint optimization.*

## **Mobile Applications Developer**, Mobile Payment Systems Ltd., Moscow, Russia

**2011 – 2013**

- Developed banking, payment and e-shop apps for several mobile platforms (Android, iOS, WM6, WP7).
- Came up with an idea and built several applications from scratch, which have received top used ratings.
- Designed a secure SOAP backend interface and implemented a lightweight protobuf based mobile gateway.

*Agile, Scrum, Android, iOS, WP, Java, junit, C#, VS, Eclipse, Objective-C, SOAP, Protobuf, OpenSSL, SVN, Oracle DB, Tomcat, JBoss, barcode recognition, JIRA, Redmine.*

## **Software Engineer**, Chelyabinsk State University, Chelyabinsk, Russia

**2005 – 2007**

Developed software for university research projects, learning process management and student rating.

Conducted research in Othello game AI algorithms (based on Alpha-Beta pruning and heuristic analysis).

*C++/QT, Javascript, C#, VB.net.*

## **EDUCATION**

### **2007-2011 Bachelor of Software Engineering,**

Moscow State University of Technology “Stankin”, Moscow, Russia.

### **2004-2007 Bachelor courses in Applied mathematics and computing,**

Chelyabinsk State University, Russia