

Harvad (Hongzhi) Li

Software Engineer — Automotive Embedded Systems Enthusiast

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Profile Summary

Passionate Software Engineer with 5+ years of experience in automotive technology and mobile application development. Currently specializing in high-performance automotive solutions at ECARX, with a strong focus on Android Auto, system optimization, and embedded systems. Deeply committed to "turning passion into reality" through innovative software engineering. Actively expanding expertise in C++ and native AOSP development to contribute to mission-critical safety and security systems. Proven ability to solve complex problems, from optimizing build times by 3.5x to architecting hybrid cloud solutions. Fluent in English and Mandarin, with a collaborative mindset and a drive to keep people safe through technology.

Core Technical Skills

- **Software Development:** Android (Kotlin/Java), C++ (Learning), Python, C#, Bash
- **Automotive Technology:** Android Auto, In-vehicle Infotainment (IVI), AOSP, Automotive UX/UI
- **System Performance:** Performance Optimization, System-level Programming, Hardware Optimization
- **Cloud DevOps:** Azure, AWS, Docker, Kubernetes, CI/CD, Hybrid Cloud Architecture
- **Architecture:** MVVM, Microservices, RESTful APIs, Event-driven Architecture
- **Tools Platforms:** Git, Android Studio, Linux, Jira, Confluence
- **Languages:** Fluent English and Mandarin Chinese, Swedish (B2 level)

Working Experience

ECARX — Senior Infrastructure & Performance Engineering Specialist

October 2024 - Present — Gothenburg, Sweden

- Leading migration of high-performance computing tasks to Azure AKS, achieving a **3.5x performance improvement** in Android AOSP build times.
- Spearheaded system-level performance tuning, resulting in record-breaking Android 15 AOSP clean build times (7.78 min), outperforming flagship cloud instances by 48%.
- Collaborating with cross-functional teams (hardware, DevOps, system architects) to design next-generation automotive development platforms.
- Participating in automotive testing validation using physical emulators and coordinating in-vehicle validation processes.
- Managing complex automotive network systems and providing technical solutions for high-performance development environments.

Synteda — Mobile App Developer & Azure Integration Specialist (Freelance)

August 2023 - September 2024 — Gothenburg, Sweden

- Developed and deployed secure native Android applications hosted on Azure cloud infrastructure.
- Implemented robust RESTful APIs and microservices for scalable application architecture.
- Integrated SQL and NoSQL databases with optimized performance for data synchronization.

IT-Högskolan — Mobile DevOps Support (Part-time)

January 2023 - May 2023 — Gothenburg, Sweden

- Provided DevOps support for development teams, ensuring seamless API connectivity and deployment pipeline optimization.
- Implemented automated testing and deployment support for backend services.

Senior Material (Europe) AB — Mobile Platform Architect

January 2022 - December 2022 — Eskilstuna, Sweden

- Led migration of business-critical applications to microservices architecture.
- Architected mobile-first backend services optimized for performance and reliability.

Relevant Projects

AndroidAuto_AI_Bot

June 2025 – Present

Android Auto, Kotlin, Python, Automotive APIs

- Designed an in-car AI voice assistant for Android Auto with custom wake-word detection, focusing on distraction-free, safety-compliant interfaces.
- Implemented real-time TTS/STT pipelines and integrated with automotive safety standards.

AndroidAuto_CarTVPlayer_KOTLIN

March 2025 – Present

Kotlin, Android Auto SDK, Native Android

- Built a native Android Auto media player using pure Kotlin and automotive-grade UI/UX patterns.
- Integrated voice command processing and optimized for in-vehicle performance and safety.

Education

IT Högskolan — Bachelor's in .NET Cloud Development — 2021-2023

Mölndal Campus — Bachelor's in Java Integration — 2019-2021

University of Gothenburg — Master's in International Business and Trade — 2016-2019

Certifications & Continuous Learning

- **Currently Learning:** C++ for Native Android Development, AOSP Build System (Soong/Make)
- AWS Certified Solutions Architect - Associate (Aug 2022)
- Microsoft Certified: Azure Fundamentals (Jun 2022)