

Aswin Vodapally *Technical Lead*

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Transforming ideas into scalable solutions with 13+ years of experience in architecting and leading robust software systems. Over the past 8 years, developed deep expertise in the **automotive domain**, with strong knowledge in **software development, system design, and middleware architecture** for next-generation mobility solutions. Proven track record in building end-to-end platforms, driving cross-functional teams, and delivering high-quality solutions in **SDV (Software-Defined Vehicle), embedded Linux (Yocto), hypervisor, and Android Automotive OS (AAOS)**. Adept at aligning technology strategy with business goals while ensuring scalability, security, and performance.

Professional Experience

Technical Lead

PeopleTech Group *October, 2017 - present*

- Architected and developed HMI applications such as **Connectivity, Camera, Settings, Audio, CarUiLib (Unbundled)**, and rapid prototypes to meet evolving business requirements.
- Developed HMI apps and Android framework services for **General Motors (GM)**, enabling cross-brand and theme support at the on-site GM **Canada** location.
- Led and mentored development teams, providing technical guidance, act as **SME**, and architectural support across multiple projects.
- Hands-on experience with Android Automotive OS (AAOS) **framework** and **VHAL/HAL** layer development for vehicle-specific integrations.
- Collaborated with cross-functional teams and **BSP** (Board Support Package) engineers to ensure smooth system integration and seamless functionality across software and hardware layers.
- Strong **troubleshooting** and **debugging** capabilities with proven ability to identify root causes and resolve complex system-level issues efficiently.
- Transitioned into **Software-Defined Vehicle** (SDV) research and development, driving innovation in next-generation automotive platforms.
- Worked on Embedded Linux development with **Yocto** build system, with good exposure in customizing distributions for IVI platforms.
- Architected **middleware stack** leveraging SDV community solutions for both Linux and Android-based IVI systems, enabling cross-platform interoperability.
- Practical experience with automotive communication protocols and standards including **SOME/IP, DDS, COVESA VSS**, and Eclipse Kuksa.
- Collaborated with cross-functional stakeholders to design scalable, maintainable, and future-ready in-vehicle software systems.
- Worked on Android bring-up over **Xen hypervisor**, enabling Android to run as a guest VM with exposure to kernel fragments and Android **/init, fstab** & device configurations.
- Lead Carplay integration on Linux OS with reference to **MFi** documentation.

Software Engineer

Previous work October, 2011 - November, 2017

Ariel Project – A mobile-based **ultrasound device** integrating custom Android applications and marketplace to deliver portable medical imaging solutions by **General Electricals**.

- Designed and developed a custom **Wi-Fi** configuration module, enabling users to select and manage wireless networks.
- Implemented device settings modules such as Language, Time & Date, and Wi-Fi for enhanced user configurability.
- Built logic for seamless switching between pre-configured Wi-Fi networks, supporting internet connectivity.
- Developed **JNI** interfaces between Android and native C++ libraries, integrating system-level modules into the application stack.
- Applied ProGuard-based code obfuscation to the entire Ariel project, ensuring security and IP protection, followed by end-to-end product testing.
- Developed proof-of-concept (POC) for Over-The-Air (OTA) app update feature as part of Ariel project innovation.
- Proposed overall UI/UX design and developed wireframes in alignment with client design guidelines.
- Built interactive prototypes for multiple modules including Activation, **GE Marketplace**, and Account Settings.
- Converted wireframes into production-ready, high-quality user interfaces.
- Implemented an app communication framework using **AIDL** for **IPC** (Inter-Process Communication) between multiple applications.
- Designed and implemented logic for Play Store integration, enabling app download, install, update, and uninstall workflows.
- Developed RESTful service endpoints using WCF (.NET framework) to support scalable backend integration.
- Implemented RESTful data parsing in Android using JSON, ensuring efficient communication with server APIs.
- Designed and built custom UI screens with support for multiple screen sizes and resolutions.
- Developed a custom Account Manager for secure login session management and credential handling.
- Implemented app settings module including activity switching and logout functionality using the Android Preference framework.

Skills

Kotlin/Java | C++ | Rust | AAOS, Embedded Linux | Xen Hypervisor | Yocto |
SOAFEE | AIDL, HAL, JNI | Clean MVVM | SOME/IP, DDS, VSS, COVESA, Eclipse SDV |
Git, Jenkins, Docker | Functional Safety Awareness

Education

Master of Computer Applications

JNTU, Hyderabad, India

07/2007 – 03/2010