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August 8, 2025

Hiring Manager, Apple Music - Android

Re: Android Engineer - Apple Music (Role 200551441-3543)

I'm an Android SDK/NDK/AOSP engineer with a career-long focus on real-time audio/video. I'm excited about the Apple Music Android role and, while the posting lists San Diego, I'd prefer to be considered from Apple's **Seattle** office (with travel to San Diego as needed).

Fit with the role (highlights):

- **Core components & large codebases:** Led an Android 9→11 migration (>2M LOC) and standardized crash/telemetry across 30+ apps at Prometheus (AP9 Tech Lead; 500K+ units shipped).
- **Real-time streaming & media stack:** Deep hands-on with MediaCodec, AudioTrack, ExoPlayer (AndroidX Media), FFmpeg, codecs (AAC/FLAC/G.711/H.264/MP3/PCM), and low-latency audio (AEC/AGC/NS).
- **NDK/C/C++ & open source:** Heavy JNI/NDK integration; maintainer of **DistroAV (OBS-NDI)** used for real-time A/V over IP (~6M downloads). Daily work includes debugging stack traces and fixing OSS deps.
- **Tools & frameworks:** Built reusable libraries (telemetry wrappers, test harnesses) and internal SDKs to accelerate teams and third-party integrations.
- **Data-driven quality:** Established metrics, experiments, and profiling (ASan/LSan) to improve reliability and latency.

Proven soft skills you call out:

- **Leadership & mentorship:** AP9 Tech Lead; code reviews, architectural guidance, and onboarding.
- **Cross-functional collab:** Worked across product, firmware, hardware, QA, and support to ship at scale.
- **Execution amid ambiguity:** On-site debugging for mission-critical customers (public safety, enterprise), balancing incomplete requirements and multiple priorities with clear, calm communication.

Passion for digital media transmission:

Since building the **Vibe** (1997) and co-creating **Sonique** (1998) MP3 players, my throughline has been moving media efficiently and beautifully - from VoIP/SIP/RTP at Google/Microsoft/Motorola to today's open-source streaming (DistroAV) and personal projects that push latency and fidelity forward. Apple Music's bar for end-to-end experience is exactly where I like to operate.

I'm a U.S. citizen (no sponsorship) and fluent in Kotlin/Java/C/C++, ExoPlayer internals, FFmpeg, unit testing, and profiling. I would love to help design, instrument, and harden Apple Music's core Android components - ideally from Seattle in close partnership with the San Diego team.

Thank you for your time and consideration.

Sincerely,

Paul Peavyhouse

Attachment: Résumé

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Summary

Android SDK/NDK/AOSP, audio/video media and RTC streaming engineer with deep experience in low-latency media systems and AI-assisted features. Original creator of **Vibe** (1997), co-creator of **Sonique** (1998) MP3 players; maintainer of major **open-source** project **DistroAV (OBS-NDI)** (~6M downloads), contributor to **open-source** projects OBS, langchain, livekit, and personal. Strong in Kotlin/Java/C/C++, networked streaming, and debugging large codebases. Experience with LLMs (HuggingFace, Ollama), MCPs, RAGs, etc.

Core Skills (Apple Music-aligned)

Android (SDK/NDK, AOSP) • Kotlin/Java/C/C++ • MediaCodec • AudioTrack • AndroidX Media (ExoPlayer) FFmpeg • Media codecs (AAC, FLAC, G.711, H.264, MP3, MP4, PCM) • Audio processing (AEC/AGC/NS) Networked streaming (NDI, SIP, RTP) • BLE • AWS • Firebase • CI/CD • Unit testing (JUnit, Mockito, MockK, Robolectric) • Profiling & sanitizers (ASan, LSan) • Open Source: DistroAV (OBS-NDI), OBS, langchain, livekit, et al. • Active on StackOverflow • Proven collaborator, communicator, solver, leader, mentor and learner. Platforms: Android, iOS, macOS, Unix/Linux, Windows, SoCs (RaspberryPi, Jetson, ESP32, STM32)

Professional Experience

Mynd.ai / Promethean - Staff Android Software Developer, AP9 Tech Lead

Seattle, WA • 2020-2024

- Led Android (AOSP) for ActivPanel 9 IFPDs (65"/75"/86"); shipped 500K+ units.
- Delivered audio (AEC/AGC/NS), video (HDMI/DP/EDID/CEC/ARC/DRM/HDCP), firmware OTA.
- Migrated Android 9 → 11 (>2M LOC); standardized Crashlytics & telemetry across 30+ apps.

Pebblebee - Senior Mobile/Android Developer, Tech Lead

Issaquah, WA • 2015-2020

- Architected and built Android/iOS apps for BLE tracking devices with real-time interactions.
- AWS/Firebase integration; crash analytics; background BLE scanning.

Twisted Pair Solutions (Motorola Solutions) - Staff Principal Software Engineer

Seattle, WA • 2009-2014

- Shipped real-time PTT/RoIP clients on Android/iOS/wearables.
- Low-latency audio streaming using AMR, G.711, Opus, Speex, MP3, PCM.
- On-site debugging for mission-critical customers.

Google - Software Development Engineer in Test

GOOG-411 & Google Voice VoIP Backend • Seattle, WA • 2005-2009

- Built SIP and RTP automation frameworks; validated VoIP backends and client/server media paths.
- Performance/scalability testing and continuous build systems.

Microsoft - Software Development Engineer in Test

RTC & Distributed Meetings • Redmond, WA • 1998-2005

- Tested VoIP/SIP audio and panoramic video conferencing (RoundTable) and RTC servers.
- Audio quality validation using TIA/ITU-T standards; worked across client, drivers, and firmware.

Night55 - Co-Founder / Developer (Vibe & Sonique MP3 Players)

Bozeman, MT • 1997-1999

- Created **Vibe**, co-created **Sonique** (skinnable UI, real-time visualizations, plug-ins) media players.
- Implemented playlist management, playback pipeline and codec support (MP3/PCM)
- Acquired by MediaScience (1998); **Sonique** acquired by Lycos (1999 for \$38.8M).

Selected Projects

- **DistroAV (OBS-NDI)** - Admin/Maintainer, Lead Dev (2023-Present): OBS Studio NDI plugin for real-time A/V streaming; ~6M downloads, ~10K daily launches; C/C++ Qt with NDI; cross-platform stability and releases.
- **NightVsKnight** - Founder (2019-Present): PiP dual-PC streaming with OBS automation; custom .NET audio tools and vocoder; Qt NDI monitor/capture; NVIDIA Maxine-based voice effects.
- **AlfredAI** - Creator (2025): Kotlin & Flutter push-to-talk AI assistant using OpenAI WebRTC Realtime; phone/watch + Bluetooth audio routing. (Supporting repos: langchain_dart WebRTC fork, openai-realtime-api-beta, openai-openapi-kotlin)

Patents

WO2013116741 - Tip-Ring-Ring-Sleeve Push-To-Talk Systems

WO2013154722 - Pulsed Input Push-To-Talk Systems

Education

Montana State University - Computer Science • Virginia Polytechnic Institute - General Studies

Citizenship

U.S. Citizen - no visa sponsorship required.