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Hiring Team - OpenAI, Applied AI Engineering (Seattle)

Re: Software Engineer, ChatGPT Android

I'm a senior Android/AOSP engineer who builds fast, reliable, delightful real-time mobile experiences. My focus spans RTC/WebRTC, low-latency audio/video, and AI-assisted features on Android and embedded devices. I've shipped at scale (**500K+** Android-based displays), maintained widely used A/V streaming software (**>6M** downloads), and driven the testing, telemetry, and architecture that keep products responsive and trustworthy.

Why I'm a strong fit for ChatGPT Android

- **Build & ship:** Led Android 11 AOSP (ActivPanel 9/Pro) from POC→EVT/DVT/PVT/MP → v1.0 (2022/05) → v2.3 (2024/11), **500K+** units deployed; previously shipped consumer Android/iOS apps.
- **Foundations:** Unified Firebase Crashlytics and MixPanel telemetry across **30+** apps; migrated **100+** repos and **100+** CI jobs; built **PromLab** (20+ panels); automated audits over **2M+** lines (AOSP 9→11).
- **Architecture & quality:** Modular SDK/NDK services for audio/video/networking; Perfetto + JUnit/Mockito/Robolectric; coverage (Sonar/Jacoco/Emma); CI gating for perf/regressions.
- **Cross-functional & developer enablement:** Partnered across hardware/firmware/mobile/cloud; authored reusable libraries and standards to speed multiple teams.

AI, RTC, and streaming that map directly to ChatGPT

- **OpenAI Realtime on Android (WebRTC):** Built **AlfredAI**, a Kotlin Push-to-Talk assistant (Phone + Wear + Bluetooth audio routing); contributed **WebRTC** additions to OpenAI Realtime examples and to Dart (**openai_realtime_dart** fork used by AlfredAI-Flutter).
- **A/V streaming at scale:** Admin/Maintainer & Lead Dev for **DistroAV** (OBS-NDI) **>6M** downloads, **>10K DAU**, **>4K stars**, **>400 forks**.
- **Voice UX:** **ChatGPT Read Aloud** extension that automatically speaks responses.

Day-one impact

- **Performance-first:** Reduce cold-start/jank/battery/ANRs with telemetry-driven crash-to-fix loops.
- **Robust testing:** Deterministic UI/RTC tests, coverage discipline, CI signals to ship fast no regressions.
- **Production-ready RTC/media:** Low-latency audio routing, fast WebRTC session management & PTT.
- **Developer acceleration:** Reusable Android modules, trace/log scaffolding, clear docs.

I've built RTC systems since 1998 (Microsoft Exchange/Office/Live Comms → RoundTable), scaled voice backends at Google (GOOG-411/Google Voice), shipped secure PTT at Motorola Solutions, and delivered mass-market Android at Pebblebee and Promethean. My through-line is **user delight, reliability, impact**.

Seattle-based (Kirkland) and ready to contribute immediately. I'd welcome a conversation on pushing the ChatGPT Android experience forward.

Paul Peavyhouse

Attachment: Résumé

ANDROID ENGINEER: AI, RTC, AUDIO/VIDEO, STREAMING

Senior Android/AOSP engineer specializing in low-latency **RTC**, **audio/video streaming**, and **AI-assisted mobile experiences**. Shipped Android at scale (**500K+ devices**), built reliability and performance into complex systems, and led architecture, testing, and telemetry for high-impact products. Creator/maintainer of widely used (**>6M downloads**, **>10K Daily Active Users**) open-source streaming software and hands-on contributor to OpenAI Realtime WebRTC integrations on Android. Dev-friendly code, user-friendly apps.

CORE FIT FOR CHATGPT ANDROID

- **Build & ship Android experiences:** Led Android 11 AOSP device line to mass production; shipped feature releases from POC → MP across versions 1.0-2.3.
- **Performance, reliability, quality:** Crash analytics & telemetry unification across 30+ apps; large-scale CI/CD and repo migrations and management.
- **Architecture & testing:** App/service architecture, SDKs/libraries, automation at multiple companies; deep hands-on with JUnit/Mockito/Robolectric and CI pipelines, Perfetto performance analysis.
- **AI + RTC on mobile:** Kotlin OpenAI Realtime **WebRTC** Android **Push-To-Talk** assistant (AlfredAI), ChatGPT Read Aloud browser extension, and WebRTC additions to OpenAI repos.
- **A/V streaming at scale:** Admin/maintainer & lead dev of **DistroAV** (formerly OBS-NDI) with **>6M downloads** and **>10K Daily Active Users** (DAU).

PROFESSIONAL EXPERIENCE

Mynd.ai / Promethean - Seattle, WA

Staff Android Software Developer | AP9 Tech Lead (2020/12-2024/12)

- Shipped **ActivPanel 9** Android 11 AOSP IFPD program (65/75/86" OEM, 20-point touch) from POC/EVT/DVT/PVT/MP → v1.0 (2022/05) → v2.3 (2024/11); **500K+ panels shipped**.
- Drove reliability at scale: Architected Firebase Crashlytics & MixPanel Telemetry library, and Data Regionalization library used by implementation and maintenance of **30+ apps**.
- Built internal quality velocity: Designed/automated "PromLab" (20+ test panels with checkout), migrated **100+ repos** Bitbucket→GitLab and **100+ build jobs** Bamboo→GitLab.
- Owned high-impact subsystems: Network (Ethernet/Wi-Fi/Bluetooth), OTA, MDM/EMM, Audio (AEC/AGC/NS), Video (DP/HDMI/EDID/CEC/ARC/HDCP/DRM).
- Leveraged **Local AI/LLM** to organize >4K Confluence pages; automated audits across **2M+** lines of custom code migrated from AOSP Android 9→11.
Tech & Tools: Android/AOSP, Kotlin/Java, Android Studio, Firebase/Crashlytics, MixPanel, AWS, GitLab/GitHub, Confluence/Jira/Bitbucket/Bamboo, JADX.

Pebblebee - Issaquah, WA

Senior Mobile/Android Developer | Tech Lead (2015/02-2020/12)

- Architected, developed, and supported Android/iOS consumer apps for BLE trackers, Crowd GPS, camera integrations; background scanning with Samsung Knox MDM controls.

- Data/quality stack: Camera[2], AWS, Realm, Firebase, Crashlytics; React Native/NativeScript
Products: Pebblebee Finder (Android/iOS), Pebblebee Stone (Android).

Twisted Pair Solutions (Motorola Solutions) - Seattle, WA

Staff Principal / Lead / Senior / Mobile SDE & SDET (2009/05-2014/09)

- Built multi-platform **Push-To-Talk (PTT) RoIP** mobile clients (Android/Glass/Wear, iOS, BlackBerry, Windows CE/Mobile/Phone) for WAVE/MOTOTRBO with real-time audio over cellular/Wi-Fi.
- Implemented codecs (AMR/G711/GSM/Opus/MP3/PCM/Speex), crypto (Diffie-Hellman, ECC, HMAC, X.509, SSL/HTTPS), Bluetooth (RFCOMM/A2DP/LE).
- Established automation frameworks in Python/C#, code coverage, CI, and mobile UI testing (JUnit/Mockito/OCMock/Robolectric/Robotium).
- On-site deployments and support for large enterprise/government customers.
Products: WAVE Mobile Communicator (Android/iOS), MOTOTRBO Anywhere (deprecated).

Google - Seattle, WA

SDET - GOOG-411 & Google Voice VoIP backend (2008/05-2009/01)

- Built **SIPp/pjsip** automation and load/perf harnesses (Empirix Hammer G5) for voice backend and **PSTN gateway**; Adobe AIR test harness for Flash client on App Engine + Wowza.
SDET - Google Pack & Chrome Auto-Update (Omaha) (2005/07-2008/05)
- Company-wide Python XML-RPC automation, Windows logon service for UAC automation; CI/build, i18n/l10n, service watchdog monitoring.
- **>100 interviews per year** to build/grow the Kirkland office from <50 to >500 employees.

Microsoft - Redmond, WA

SDET - Microsoft Office RTC Distributed Meetings (RoundTable) (2003/09-2005/07)

- Tested Windows CE **PSTN/VoIP/SIP** audio-gain, video-panorama USB device; TIA/ITU-T standards.
SDET - Microsoft RTC (Live Communications Server) (2003/02-2003/09)
SDET - Exchange/NetDocs/Office RTC (1999/06-2003/02)
STE - Exchange RTC (IRC) (1998/05-1999/06)

Night55 - Bozeman, MT

Co-Founder/Developer/Tester (1997/01-1999/09)

- Original creator of **Vibe** MP3 player; co-creator of **Sonique** MP3 player • Acquired for \$38.8M.

RELEVANT OPEN SOURCE & AI/RTC/STREAMING PROJECTS

- **DistroAV (OBS-NDI):** Admin/Maintainer, Lead Developer (est 2016, Admin since 2023)
>6M downloads, >10K DAU, >4K stars, >400 forks • <https://distroav.org>
- **AlfredAI (Kotlin, Android) - OpenAI Realtime WebRTC**
Push-To-Talk assistant; Phone + Wear + Bluetooth audio routing • <https://github.com/swooby/AlfredAI>
- **langchain_dart - openai_realtime_dart (WebRTC)**
Dart fork adding **WebRTC** to OpenAI Realtime (used by AlfredAI-Flutter).
https://github.com/swooby/langchain_dart/tree/main/packages/openai_realtime_dart
- **AlfredAI-Flutter (Dart/Flutter)** - Experimental client using the Dart WebRTC additions.
https://github.com/swooby/alfredai_flutter

- **OpenAI Realtime forks (WebRTC)** - Added **WebRTC** to OpenAI's WebSocket-only Realtime examples; enabled A/B testing for behavior differences.
<https://github.com/swooby/openai-realtime-api-beta>
<https://github.com/swooby/openai-realtime-push-to-talk>
- **openai-openapi-kotlin** - Kotlin generation (+ tweaks) of OpenAI's OpenAPI spec (used by AlfredAI).
<https://github.com/swooby/openai-openapi-kotlin>
- **ChatGPT Read Aloud (Browser Extension)** - JS injection to auto-speak ChatGPT responses.
<https://github.com/swooby/chatgpt-extension>
- **NightVsKnight** - Multi-Box Picture-in-Picture game streaming system; custom .NET + OBS software, Audio/USB/HDMI orchestration • <https://youtube.com/@NightVsKnight>
- Additional A/V/RTC utilities listed under NightVsKnight and swooby.com.

RELEVANT SKILLS

Android: Android/AOSP/SDK/NDK, Android Studio, Jetpack/AppCompat, Wear/Glass, MDM/EMM, JADX,
Languages: Kotlin, Java, Dart/Flutter, C/C++, C#, Python, JavaScript/Node.js, Go, Qt,
Media/RTC/Streaming: WebRTC/RTC, Pion, VoIP/SIP/PSTN, Audio (AEC/AGC/NS), Video (HDMI/DP/DRM/EDID/CEC/ARC/HDCP), Codecs (AAC/FLAC/G711/H.264/MP3/PCM/Opus/Speex/AMR), **AI:** AI/LLM/RAG/GPT (Cloud/Local), OpenAI Realtime integrations (WebRTC & WS), LangChain, **Quality/Perf:** Perfetto, Crashlytics, MixPanel, JUnit/Mockito/Robolectric/Robotium, coverage (Sonar/Jacoco/Emma), automation frameworks, **Cloud/CI/CD:** AWS, Firebase, GitLab/GitHub, Jenkins/Maven/Gradle/Ant, **Networking:** Cellular/Wi-Fi/Bluetooth (LE/A2DP/RFCOMM), TCP/UDP, Wireshark (custom dissector), **Security:** SSL/HTTPS, HMAC/SHA, X.509, Diffie-Hellman, Elliptic Curve

PATENTS

- **WO2013116741** - TIP-RING-RING-SLEEVE PUSH-TO-TALK SYSTEM AND METHODS
<http://swoo.by/WO2013116741>
- **WO2013154722** - PULSED INPUT PUSH-TO-TALK SYSTEMS, METHODS AND APPARATUS
<http://swoo.by/WO2013154722>

PUBLICATIONS

- *Using AJAX to Enable Client RPC Requests*, Google App Engine (2008): <http://swoo.by/pub/ajax>
- *CarPC Hacks Hack 65*, O'Reilly (2005): <http://swoo.by/pub/carpc>

EDUCATION

- Montana State University - Computer Science • Virginia Tech - General Studies

OTHER

- References - <http://swoo.by/pv/refs> (more available upon request)
- U.S. Citizen - no visa sponsorship required