

Hafiz Waleed Hussain

Senior Android Engineer · On-Device ML · Platform Infrastructure · 14 Years
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SUMMARY

Senior Android engineer with 14 years of experience delivering high-scale consumer products used by billions. Spent 5+ years at Meta across four products — WhatsApp, Instagram, Messenger, and Workplace — owning infrastructure from on-device ML model management to threading architecture, platform-wide frameworks, and reliability systems. Consistent track record of leading zero-to-one features, establishing technical standards across platforms, and raising engineering quality through mentorship, code review culture, and systematic testing.

EXPERIENCE

Meta *April 2024 – Present · Mountain View & New York & London · 5 yrs 4 mos*

Software Engineer — WhatsApp · Menlo Park, CA · *April 2024 – Present*

On-Device ML Infrastructure

- Built a production ML Model Manager from scratch — resumable, high-performance, and now powering every on-device AI feature in WhatsApp.
- Cut per-model data consumption by 10–40 MB through optimized delivery pipelines, directly reducing bandwidth costs for billions of users.
- Scaled the framework to 30+ live models, enabling Transcription, Translation, and future on-device AI features to ship without infrastructure rework.

Threading & View All Replies

- Architected the ThreadId database layer — a new cross-platform standard now adopted on both Android and iOS.
- Owned the View All Replies framework end-to-end: refactored core conversation logic to support threading, pagination, and scalable reply rendering at scale.

PTT Transcription & Translation

- Drove infrastructure integration and the reliability layer for the global rollout of PTT Transcription and Translation.
- Built internal feedback and logging systems that quantify transcription accuracy and surface quality regressions.
- Led PRE investigations that unblocked the feature for global production release.

Software Engineer — Instagram · New York, NY · *March 2023 – April 2024*

- Architected the Quick Promotion (QP) Platform instrumentation layer end-to-end — QPL logging shipped across production; debugging dashboard adopted across the team.
- Drove migration from the legacy QP system to the new SDK and built the QP API Stability Dashboard, cutting investigation time for engineers across the team.
- Owned Android architecture for Standouts — a client-side, on-device feature surfacing personalized yearly highlights to users (think Spotify Wrapped for Instagram). Delivered background video downloader, UI rendering, loading/retry state machines, file handling, and multi-screen support end-to-end.

Software Engineer — Messenger · New York, NY · *February 2023 – March 2023*

- Hardened the internal C/C++ Messenger Library — refined API implementation, reduced crash rate, and built a visibility dashboard to track library health over time.
- Eliminated Mutex Contention impact on E2E latency; shipped a real-time monitoring dashboard to prevent recurrence.
- Integrated the Logging library end-to-end with MSYS — server-side checkpoints merged with client-side traces, dramatically improving debuggability.

Software Engineer — Workplace & WorkChat · London, UK · *December 2020 – February 2023*

- Led Android Battery Efficiency for Workplace and WorkChat — regression dashboards, automated alerts, and competitive benchmarking against Facebook Blue and Messenger.
- Built and shipped Rage Shake for WorkChat Android, enabling in-app bug reporting directly from the field.
- Delivered Test Health dashboard (Quality, Coverage, Effectiveness) for Workplace/WorkChat E2E tests; onboarded critical flows onto internal protection tooling to prevent production regressions.

- Revamped Android Reliability Breakdown Metrics dashboard; reduced OnCall noise by resolving cascading false-positive iOS regression alerts.
- Spearheaded Java → Kotlin migration across the org; ran knowledge-sharing sessions, mentored engineers, and established Kotlin code review standards.

GOJEK *May 2019 – November 2020 · Singapore · 1 yr 7 mos*

Product Engineer (Android) • Singapore • *May 2019 – November 2020*

- Worked across Driver and Consumer apps simultaneously; managed a team of Android engineers.
- Introduced MVI architecture and built an in-house functional test framework — both adopted team-wide.
- Owned security hardening of the Driver App and delivered Facial Recognition integration.

90 Seconds *August 2018 – May 2019 · Singapore · 10 mos*

Senior Android Engineer • Singapore • *August 2018 – May 2019*

- Maintained three parallel Android products; improved GitLab CI with Fastlane, cutting release cycle overhead.
- Delivered new design system, GraphQL documentation, and onboarding docs that cut ramp-up time for new engineers.

iCar Asia Limited *July 2015 – August 2018 · Kuala Lumpur, Malaysia · 3 yrs 2 mos*

Lead Engineer (Android) • Kuala Lumpur, Malaysia • *December 2017 – August 2018*

- Promoted to Lead within two years. Established CI/CD to Play Store Beta, drove 100% Kotlin adoption, introduced TDD, and improved hiring with live coding assessments.

Software Engineer (Android) • Kuala Lumpur, Malaysia • *July 2015 – November 2017*

- Built single-source-code architecture serving three country markets. Architected cross-platform chat feature; introduced MVVM + Rx + Dagger 2; managed 5 remote engineers.

Earlier Career *2011 – 2015 · Pakistan*

Android Technical Lead at Agnitus (Islamabad) — led Android team, built Unity3D ↔ Android native plugins. Senior Software Engineer at VentureDive — Athan Pro & Careem. Android Developer at Cognitiv Labs & WeMo Tech — solo developer, hired and grew Android teams, shipped 15+ projects as a freelancer on oDesk.

TECHNICAL SKILLS

Languages: Kotlin, Java

Android: Android SDK, Jetpack, Compose, MVVM / MVI / MVP, Dagger 2, RxJava, Coroutines, Retrofit, Room

ML & Infra: On-device ML model management, MSYS, threading architecture

Tooling: Buck, Gradle, Mercurial, Git, Phabricator, GitLab CI, Fastlane, Jest

Testing: Unit, TDD, functional / E2E, instrumentation dashboards, regression alerting

CONTENT & COMMUNITY

uwanttolearn.com — Founder. Technical blog and learning platform on Android, architecture, and engineering craft.

YouTube (@HafizWaleedHussain) — Android and software engineering video content.

EDUCATION

B.Sc. (Hons.) Computer Science • CGPA 3.81 / 4.0

Garrison Post Graduate College, affiliated with University of Engineering & Technology, Lahore • 2008 – 2012