

Mojtaba Koosej

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Summary

- Staff-level software engineer with 10+ years building large-scale mobile infrastructure, networking, and media systems across iOS, Android, and C++ platforms.
- Led cross-platform networking and media architecture for Snapchat serving 900M+ MAU, including gRPC, QUIC, Chromium networking, observability, and carrier optimization initiatives.
- Deep expertise in performance engineering, low-level systems, OSS integration, build systems, and developer infrastructure. Proven track record driving multi-team technical initiatives, mentoring engineers, and delivering measurable improvements in latency, reliability, engagement, and infrastructure cost.

Work Experience

Software Engineer **Snap Inc (Snapchat +900M MAU), Santa Monica, CA** **Jan 2017 - May 2026**

Media Delivery Platform Team : Nov 2021 - May 2026

- Owned Snap's cross-platform networking dependency ecosystem across Chromium networking, gRPC, Protobuf, and BoringSSL powering critical mobile infrastructure for Snapchat's 900M+ MAU platform.
- Led security patching and upgrade strategy for foundational networking libraries in collaboration with Client Foundation, Cloud Infrastructure, and Application Security teams, enabling zero-incident production rollouts.
- Developed an AI-assisted migration system for large-scale OSS dependency upgrades across C/C++ and Rust libraries, automating patch migration, ABI compatibility validation, and compiler/linker optimization workflows.
- Architected Snapchat's cross-platform Media Scheduling Framework, coordinating bandwidth allocation across Messaging, Stories, and AR workloads to improve playback reliability on constrained mobile networks.
- Deeply integrated media scheduling with Snap's Chromium-based networking stack, leveraging layered caching and network prioritization to improve startup latency and playback stability.
- Optimized playback behavior across iOS and Android by tuning startup byte strategies and rebuffering heuristics for low-bandwidth environments.
- Architected Snap's internal Network Quality Estimator used to predict network conditions for media delivery workloads where adaptive bitrate streaming was unavailable.
- Designed low-latency prediction models using low-level telemetry from Snap's networking engine, achieving prediction accuracy within sub-10ms error margins.
- Mentored new graduate and mid-level engineers delivering high-impact cross-platform infrastructure projects.

Mobile Client Foundation Team : Sep 2018 - Nov 2021

- Technical lead and primary owner for Snap's cross-platform C++ networking and gRPC architecture supporting mission-critical services including Messaging, Maps, and Identity across iOS, Android, and WebAssembly platforms.

- Led the full native networking integration strategy for Snapchat Android, optimizing JNI boundaries, memory footprint tradeoffs, and networking performance between native and Java layers.
- Improved messaging and media reliability through socket lifecycle optimization, retry handling, and timeout tuning, reducing Android memory-pressure crash rates by 5%.
- Built foundational networking infrastructure later adopted for Spectacles AR platform integrations.
- Implemented connection warming and retry optimization strategies reducing time-to-first-byte by 80ms and lowering annual infrastructure costs by approximately **\$2M**.
- Received Snap Tech Excellence Award for identifying and resolving a difficult-to-reproduce login reliability issue through new telemetry instrumentation, improving login success rates by **2%** and contributing to the global DAU north star.

Network Observability & Carrier Partnerships

- Engineering lead for carrier and cloud networking initiatives focused on maintaining global Snapchat performance and operational stability.
- Designed carrier-level observability systems measuring ASN-specific networking metrics including QUIC/H3 adoption, latency distributions, and failure rates.
- Built data pipelines and operational dashboards using BigQuery, Airflow, Flink, and Prometheus to diagnose networking and routing failures across global carrier environments.
- Led cross-functional incident resolution efforts with AWS, Google Cloud, AT&T, Verizon, STC, and Telcel to mitigate routing instability and regional networking degradation.
- Resolved zero-rating configuration failures with Telcel, restoring app access for data-constrained users and increasing regional engagement by **15% month-over-month**.
- Identified and mitigated accidental QUIC throttling on AT&T infrastructure, reducing user-visible loading failures for a major monetized US user cohort.
- Collaborated with cloud providers and regional networking partners to resolve peering and routing issues in Saudi Arabia and Pakistan, reducing metadata latency by approximately **160ms**.

Developer Tooling & Migration Support

- Drove cross-functional networking migrations for Login, Registration, and Friending teams, enabling adoption of Snap's internal gRPC platform.
- Built debugging and observability tooling integrated with Perfetto, Flipper, and Jira to improve networking diagnostics and developer productivity.
- Helped architect automated Android gRPC code generation and artifact publishing pipelines, eliminating manual stub integration workflows.

Developer Tools & Productivity Team : Jan 2017 - Sep 2018

- Led a small engineering team delivering the first large-scale UI test harness integration into Snapchat's primary CI workflow.
- Developed an in-house iOS crash reporting SDK replacing Crashlytics and enabling custom analytics instrumentation.
- Technical lead for Snap's next-generation iOS UI testing framework based on XCTest, mentoring feature teams through framework migration and adoption.
- Designed a unified cross-platform schema for iOS and Android test collection enabling centralized CI analytics and reporting.

- Resolved critical accessibility and localization issues during migration of major Snapchat product surfaces to the new testing framework.

Test Engineer
2016

Apple Inc, Cupertino, CA

Jan 2015 - Jul

- Contributed to right-to-left (RTL) support initiatives for iOS 9 across UIKit and Apple first-party applications.
- Worked closely with iOS framework teams on keyboard layouts, typography, and localization support for Arabic, Persian, and Urdu.
- Supported first-gen Apple Watch localization and iPad Pro development efforts by building automated workflows for hardware-specific localization screenshot generation.

Early Experience

Full Stack Engineer

Nemetschek Vectorworks, Columbia, MD

2013-2014

- Built a custom content management system (CMS) for updating the user guides directly shipped with each update of Vectorworks CAD software. Developed customer-facing web solutions for marketing teams for specific campaigns

Education

- **B.Sc. Computer Engineering**, Isfahan University of Technology, Isfahan, Iran **2006 - 2011**
 - 2008 ACM ICPC Contestant

Skills

- **Languages:** C++, Swift, Objective-C, Java, Kotlin, Python, JavaScript, TypeScript, SQL
- **Client & iOS & Android:** Modern C++, LLVM, Bazel, CMake, UIKit, SwiftUI, Foundation, Accessibility, Networking, Swift Concurrency & GCD, Performance Tuning, Memory Management, Perfetto, Tracing
- **Platform & Infrastructure:** Quic, WebRTC, gRPC, Edge Networking, Peering, Protobuf, Chromium, Compression, BigQuery, CI/CD, Grafana, Real-time Telemetry, Reliability Dashboards
- **AI & Developer Tooling:** Claude Code, Codex, Cursor, Gemini, Gemma, MCP, RAG, Prompt Engineering, Agentic Workflows, self-healing agents
- **Leadership:** Cross-functional Technical Leadership, A/B Testing, Analytics, Roadmap Planning, Mentorship

Interests

Soccer, strategy games, photography, history, and languages.