Allen Wan

Senior Software Engineer at Google

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Full-stack product engineering from design to worldwide launch: LLM personalization and evaluation for AI Mode and AI Overviews, each with over a billion monthly users; large-scale experimentation; and Google Search's results page for shopping queries.

EXPERIENCE

Google

Mountain View, CA · 2019 – Present

Senior Software Engineer · Shopping, AI Mode & AI Overviews — 2025 – Present

Kotlin · C++ · Python · LLM prompt design

- Designed and ran long-running holdbacks that measured the cumulative impact of AI Overviews and AI Mode on shopping queries, as sole owner of the design and the executive report.
- Landed intent-gated shopping personalization instructions, with golden tests, as the top fix for AI Mode's unified system prompt.
- Built a synthetic-profile benchmark with a ground-truth LLM judge, turning noisy log comparisons into fast prompt iteration.
- Leading recipient-aware gift personalization, now in evaluation, and a multi-turn memory trigger, now in a live experiment, through prompt design and classifier context engineering on latency-constrained models.
- Built intent-based counterfactual logging for large-scale holdbacks and authored the org-level guidance for AI feature holdbacks.
- Completed the rollout of the redesigned desktop results page for shopping queries on Google Search to most markets worldwide in 2026, as lead engineer and project owner.

Software Engineer II → III · Shopping on Google Search — 2021 – 2025 · promoted 2022

TypeScript · HTML/CSS · Java · C++

- Drove the redesign of Google Search's desktop results page for shopping queries as lead engineer and project owner, from the initial design through the US launch in 2024 and five more countries in 2025; users strongly preferred it in every market tested.
- Widened the page to a five-column product grid with 25% more products per row and removed the right-side column, coordinating a 13-engineer US launch team across Shopping, Search, and Ads in experiments spanning four serving systems.
- Isolated each layout change's latency cost with granular experiment arms, then offset it by designing asynchronous loading for the desktop filter panel, so the redesign launched at near-neutral latency.
- Built and launched the mobile All Filters panel, then re-architected it across the frontend, search backend, and ranking service to load on tap, which cut its latency cost to near zero and unblocked the high-priority org-level launch it shipped with.
- Reworked the core results grid so non-product cards can sit among products and designed the slot conflict resolution other grid features use; launched in-grid suggestions.

Software Engineer II · Google Shopping iOS app — 2019 – 2021

Swift · Objective-C · Java · Flutter

- Built price tracking end to end, from the Swift client to the Java server API, and led its launch on iOS and Android.
- Built the "Share to compare" iOS share extension from scratch, turning a product shared from any app into a Shopping search.
- Engineered a custom scroll-aware product page footer and its shared server API, and led its staged launch on iOS and Android.

Software Engineering Intern · User Feedback · Java, JavaScript — 2018

EARLIER EXPERIENCE

Software Engineer Intern, Facebook · Monetization · Built an iOS AR try-on ad format that ran live in the Facebook feed. 2018

Software Engineer Intern, Apple · AppleCare · Built internal web tools that cut day-long workflows to minutes. 2017

Software Engineer Intern, Acenda · Built full-stack e-commerce web features. 2016

PROJECTS

allenwan.dev · Personal site and *To Arms, Squire!*, a browser roguelike RPG — 2026

Next.js · TypeScript · Supabase · Vercel

- Built end to end: run-based play with saves, an arena leaderboard, card-based combat, and a skill tree, on a hand-built site.

EDUCATION

University of California, San Diego · B.S. Computer Science · GPA 4.0 — 2019

SKILLS

AI & experimentation: LLM prompt design, LLM-as-judge evaluation, synthetic benchmark design, large-scale A/B testing, long-running holdbacks, counterfactual logging, human-rater and preference studies

Languages & platforms: TypeScript, Java, C++, Kotlin, Swift, Objective-C, Python, HTML/CSS on GWS (Google's web frontend), server-driven UI, iOS app extensions, React and Next.js, Flutter