

Xiaodan (Sheldon) Wang

Staff Software Engineer — Agentic Systems & AI Infrastructure

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EXPERIENCE SUMMARY

- ▶ 2+ years building and operating production AI agent systems at **Meta scale**: multi-agent architectures with self-improving feedback loops, schema-constrained handoffs, and supporting agent infrastructure (versioning, CI reliability).
- ▶ 12+ years of industrial software engineering across iOS, Android, web, and backend at companies with **3+ billion combined MAU** — iOS as primary depth.
- ▶ 6+ years leading multi-quarter, cross-team initiatives — large-scale refactors, flagship launches with A/B rollout, cross-org migrations — including resource planning.
- ▶ People leadership: mentored **5+ engineers to E5 promotion** as TL; managed high-severity 'code red' P0/P1 incident response and performance-improvement-plan (PIP) processes.
- ▶ Snapchat iOS codebase **top-10 all-time committer**; Facebook Monetization pillar Swift contribution **ranked #1 in 2025**; led **150+ AI/ B test launches** (up to 200k LOC in a single test).
- ▶ Rated **Greatly Exceeds Expectations** in PSC; ranked **top 3 of 700+** engineers org-wide in coding contribution, driven substantially by AI-assisted development workflows.

AGENT & AI SYSTEMS EXPERTISE

- ▶ Multi-agent architecture & orchestration: task-specialized subagent pipelines, schema-constrained handoffs, self-improving agent loops, node/graph-based scaling architectures; agent infrastructure (marketplace/plugin versioning, CI reliability tooling).
- ▶ Familiar with RAG architectures and retrieval-augmented pipelines.
- ▶ Languages: Swift, Objective-C, TypeScript, PHP (Meta variant); object-oriented, protocol-oriented, and functional programming paradigms.
- ▶ Tooling: Cursor, Xcode, VSCode, GitHub, livegrep, macOS terminal/bash; SQLite and large-scale SQL querying in GCP.
- ▶ iOS depth: Core Bluetooth, GCD, Core Data, Swift Concurrency, UIKit, MapKit, APNS, Core Location.

PROFESSIONAL EXPERIENCE

Meta Platforms, Inc.

June 2025 – Present

Facebook Monetization, Tech Lead — Facebook / Instagram

Ramped extremely fast — Exceeds in H1 PSC, **Greatly Exceeds in H2 PSC**; ranked **top 3 of 700+** engineers org-wide in coding contribution.

Agent Architecture & Infrastructure

- ▶ Built a **self-evolving 3-agent** Swift migration system: Agent 1 (Converter) performs code conversion and emits key metrics; Agent 2 (Brain) consumes those metrics to open PRs improving Agent 1's prompts, skills, and MCPs, and to refine its own queries; Agent 3 (Feeder) surfaces additional signals to trigger further learning in Agents 1/2.
- ▶ Designed a **3-layer subagent pipeline** for mobile UI verification — spec compiler, navigator, and comparator — passing schematized data between layers to produce structured verdicts for reimplementations; reconciled deterministic control flow with autonomous handling of known and unknown UI node states.
- ▶ Pioneered a node/graph-based agent architecture for scaling, replacing traditional E2E test architecture entirely; the system now supports **100+ engineers'** workflows.
- ▶ Contributed to core agent marketplace infrastructure: versioning system and plugin/dependency version management.
- ▶ Architected agentic flows using an optimized mix of deterministic Python scripting and non-deterministic LLM judgment, continuously tuning the stability-vs-scalability tradeoff across systems.

Applied Agent Impact

- ▶ Built Craft Scout, an AI-driven exploration agent testing ad rendering across combinatorial dimensions (ad style × ad ID × device settings — dark mode, RTL, etc.) to surface design/UI gaps at a scale infeasible for human triage, grounded in predefined design principles and historical project data — drove a **0.01%+ revenue lift** for Facebook.
- ▶ Built a daily-run codemod agent for deadcode deletion and schema-sync cleanup, saving **\$5M+/year**.
- ▶ Led an Objective-C → Swift migration codemod covering **30k+ LOC in 3 months**, informed by internal research showing Swift's token efficiency reduces agent coding costs.
- ▶ Contributed to company-level CI post-commit hooks to maximize first-pass CI success, reducing first-round CI failures by **60%+** — critical for teams shipping large stacked diffs.

Platform & Org Leadership

- ▶ Led ads post-rendering workflow reliability in Newsfeed, Permalink, and Reels, protecting **\$20–40M in revenue**.

- ▶ Led redesign and rewrite of iOS/Android metrics reporting flow, completing ads validation with **30% fewer events** (at billions-per-day scale) and **10% smaller payload** size.
- ▶ Drove org-wide Swift adoption: authored **10,000+ lines** of new Swift in the first 4 months and helped align **150+ iOS engineers** toward Swift adoption, raising org Swift adoption from **5% to 50%** of new code.
- ▶ Built an internal toolset website bundling multiple AI tools to support migration and adoption.
- ▶ Unblocked a cross-platform migration project **stalled for 1.5 years, launching it in 3 months** (ODS tracking, regression analysis).
- ▶ Led H2 planning through a period of rapid organizational change, aligning cross-functional partner teams through shifting priorities.
- ▶ Identified mobile developer efficiency gaps to help shift engineers from in-the-loop to on-the-loop orchestration of agent workflows.

Snap Inc.

March 2019 – June 2025

Snapchat iOS app (iTunes)

Memories Team, iOS Lead March 2020 – June 2025

- ▶ Led the team managing key pages serving **150+ million iOS DAU**.
- ▶ Delivered multiple cost-saving projects reducing media upload/retrieval/storage cost (S3/S4) by **\$10M+ annually**.
- ▶ Led rewrite of the entire backup stack onto a cross-platform TypeScript solution shared by iOS and Android (web-eligible in the future): 7 months of development, 11 months of rollout optimization; reduced backup-incomplete rate 20% (6% → 4.8%); **350M+ snaps processed daily**; cut WWAN upload data **40%** (0.5MB → 0.2MB per user per day).
- ▶ Owned Memories playback latency as a core metric across **4 billion monthly views**; ran a 3-month A/B rollout (10k LOC) to mitigate migration regressions.
- ▶ Improved prefetching logic, boosting **P90 image viewing latency 40%** and **P90 video viewing latency 60%**, with meaningful downstream engagement lift.
- ▶ Led the Matcha project: rewrote **200,000 lines of code** to modernize architecture around proper dependency injection, across multiple quarters, leading 10 internal engineers and coordinating with 30+ other teams; designed 100+ libraries.
- ▶ Company-level Matcha architecture lead overseeing multiple teams; won the company-wide **Technical Excellence Award**.
- ▶ Built a story editor feature (0 to 1) enabling users to create, edit, and order snaps in custom stories — **50M+ daily users**.
- ▶ Resolved high-severity (P9999) customer-impacting issues.
- ▶ Mentored and developed **5+ engineers to E5 promotion** as TL, tailoring project scope and coaching to each person's growth areas.
- ▶ Led multiple high-pressure 'code red' incident responses (P0/P1), coordinating cross-team war rooms under time pressure.
- ▶ Managed performance-improvement-plan (PIP) processes as TL — designing recovery-focused project scope for the teammate while concurrently staffing and executing critical P0/P1 work.

Spectacles Team, iOS March 2019 – March 2020

- ▶ Launched Snapchat's flying drone camera, **Pixy**.
- ▶ Major contributor to the Spectacles V3 launch, including dual camera support.
- ▶ Rewrote and owned the data transfer stack (BLE, Bluetooth Classic, WiFi), designed for extension to future devices.
- ▶ Owned code and release pipeline for factory QC apps used in China/Taiwan manufacturing.

EARLIER EXPERIENCE

BMW Connected & MINI Connected — Senior iOS Engineer (onsite)

May 2017 – March 2019

- ▶ Owned POI search and trip management features; built a unified map-provider interface (HERE, Apple Maps) across markets; shipped the **first-gen in-car head unit** (Node.js/TypeScript) and a cross-platform after-sales tab (React Native); partnered with the ML team on personalized promotions.

Citi Mobile — iOS Engineer, Payments Team (onsite)

April 2016 – May 2017

- ▶ Owned cards, bill payments, and account management features; built calendar import/export and Apple Watch account summary support; integrated credit score reporting; prototyped Siri-based payments.

PERSONAL PROJECTS

- ▶ **NewsAI** — AI news aggregator/summarizer built for fun: multi-agent development with Cursor, Claude API for summarization, MailerLite for subscriptions, Vercel for hosting/deployment, Neon serverless database, Google Analytics.
- ▶ **Personal blog site** — built with multi-agent development workflows, hosted on GitHub Pages, deployed via GitHub Actions.

EDUCATION

M.S., Electrical Engineering — University of Colorado Denver, Denver, CO

B.Eng., Electronics Engineering — Beijing Technology and Business University, Beijing, China