Taige Zhang

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PROFESSIONAL EXPERIENCE

DoorDash Inc. New York, NY
Software Engineer *Jan. 2023 – Present.*

Optimized and Unified Ads & Promos serving

- Consolidated 7 merchandising promotions serving endpoints into a single unified pipeline (Kotlin + gRPC + Armeria) with dependency-map orchestration to minimize idle/wait time; leveraged advanced indexing (based on ElasticSearch and Lucene) for faster candidate retrieval and deprecated Cassandra faceted-search pattern to cut latency and storage. Shipped via shadow-traffic parity + staged rollouts for zero-client-change cutovers.
- Performance & cost efficiency: End-to-end serving latency 42.5% and latency fluctuation 83%, improving user experience and headroom during peaks; 6× campaign-indexing throughput; $3.48M annual hardware savings (50% efficiency gain) plus $290,031/month Ops reduction.

Auction-ranked Homepage Banners

- Built a dedicated ranker leveraging ML models and an auction-based mechanism to optimize banner placement and performance; normalized inputs and implemented pCTR × bid (+priority as pacing) ranking with deterministic tie-breakers, kill-switches, and experiment/feature-flag hooks for safe rollout.
- Extended SpendTracker/BudgetCap (Kafka + Flink) across services for CPM; added accurate impression/click cost accounting, budget pacing, and auto-deactivation when out-of-budget, with full event tracking for auditability.
- Engagement lift at scale: CTR +18.8%, clicks +26.8%, deduplicated impressions +6.7%.

Owned Content Management Service end-to-end

- Sole DRI for this SpringBoot service serving dynamic Ads&Promos assets. Delivered a seamless, zero-incident replatform from AuroraDB → CockroachDB with no client-visible changes.
- Zero-downtime cutover: Designed a no-pause, no-regression transition (dual w/r + backfill + CDC)—reads/writes continued uninterrupted while we validated the new datastore, so the switch was completely user-unaware.
- Dual-datasource coexistence: Implemented coexisting Aurora & CRDB data sources in Spring Boot via code-level configuration and routing which enabled an intermediate "both-live" state before the final flip.

Pinduoduo Inc. Shanghai, China
Software Development Engineer *Jul. 2020 – April. 2021*

- Collaborated with product managers, design and backend teams to optimize and implement new features for Pinduoduo's flagship Android App and new Duoduo Deliver App for logistics network.

SKILLS

- Languages: Kotlin, Java, Python, JavaScript, TypeScript
- Backend/Data/Ops: gRPC, SpringBoot, Cassandra, PostgreSQL, CockroachDB, Snowflake, ElasticSearch, Redis, Kafka, Flink, Airflow/Cadence, Prometheus/PromQL, ArgoCD
- Frontend/Mobile: HTML/CSS, React, Jest, Rush, NextJS, Android, Jetpack Framework

EDUCATION

Rice University Houston, Texas
Master of Computer Science *Aug. 2021 – Dec. 2022*

- **GPA:** 3.87/4.00

Wuhan University Wuhan, China
Bachelor of Engineering *Sep. 2016 – Jun. 2020*

- **GPA:** 3.83/4.00