

LEVI (CHENGHAO) XIA

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EDUCATION

University of Southern California (MS in Computer Science), Los Angeles	Aug. 2023 – Dec. 2025
University of Nottingham (BEng in Engineering), Nottingham, UK	Sept. 2019 – Jul. 2023

WORK EXPERIENCE

Fullstack Software Engineer Magic Custom Inc., Queens, New York	Aug. 2025 – Present
<ul style="list-style-type: none">Enabled real-time tracking of ~1K SKUs across 4 warehouses by architecting an event-driven inventory engine, ensuring 100% auditability and safe concurrent updates via an immutable movement-event model.Reduced stock reconciliation time by 45% by implementing a barcode-integrated dashboard optimized with composite B-tree indexing and denormalized views to resolve high-concurrency query contention.Improved restock predictability by 18% by developing a supplier management module that utilized reorder-point and safety-stock algorithms to balance demand variability against warehouse capacity constraints.	
Founding Frontend Engineer Mirastrom Inc., New York, New York	Jul. 2025 - Present
<ul style="list-style-type: none">Boosted session duration by ~15% by designing a recommendation engine that ranks photographers and models using engagement signals and internal scoring systems to improve discovery relevance.Cut average image load times by ~40% by implementing a CDN media delivery solution with location-based prefetching and AI-driven style recommendations to optimize the user experience.Eliminated booking conflicts by engineering a real-time availability synchronization engine using WebSockets, ensuring sub-100ms state consistency across concurrent sessions.	
Software Developer Intern Bright Start Ed-Tech Inc, Chino Hills, California	Mar. 2025 – Aug. 2025
<ul style="list-style-type: none">Improved daily active user (DAU) re-engagement by 20% by architecting a personalized engagement engine with deep linking and Firebase push notifications for streak tracking and lesson reminders.Reduced moderation effort by 30% and page load times by 38% by automating CMS workflows and spearheading the end-to-end iOS deployment and App Store submission process for a React Native application.	
Software Engineer Intern Missfresh Ltd., Beijing, China	May 2021 – Aug. 2021
<ul style="list-style-type: none">Reduced notification latency by 64% (5s to 1.8s) and achieved 95% on-time delivery updates by optimizing a high-throughput pipeline using WebSockets and Redis Streams.Streamlined fulfillment monitoring for 53,000 daily orders by deploying real-time Vue.js dashboards for 200+ operations staff, significantly reducing delivery errors during peak traffic periods.	

SELECTED PROJECTS

Autonomous Multi-Agent Quant Trading & Risk Orchestrator: AI Prediction Market System	
<ul style="list-style-type: none">Minimized end-to-end signal latency to <250ms by architecting an event-driven ingestion engine using Redis Streams to synthesize Sportradar TCP feeds with live market odd-swings, enabling arbitrage identification before mainstream play-by-play updates.Architected a multi-agent "Strategy Filter" using LangGraph to manage stateful, asynchronous workflows between specialized "Injury" and "Integrity" agents, utilizing Chain-of-Thought (CoT) reasoning to dynamically adjust position sizing based on real-time risk signals.Optimized high-concurrency data fusion by implementing a low-latency event pipeline that correlates asynchronous market movements with live game data using PostgreSQL denormalized views for sub-millisecond query performance on predictive signals.	
Neural Interior Designer: Real-Time Dynamic Relighting Engine	
<ul style="list-style-type: none">Architected a dynamic neural relighting engine by decoupling albedo, surface normals, and lighting within a Gaussian Splatting framework, allowing for real-time manipulation of light sources without re-training the scene.Simulated physically accurate time-of-day transitions by implementing Environment Map Importance Sampling and Spherical Harmonics to dynamically update global illumination, shadows, and color temperature from 2500K to 6500K.Solved cross-room light leakage by engineering a Semantic Occlusion Field that enforces 3D geometric constraints on light propagation, preventing light "bleeding" through walls in multi-room reconstructions	

SKILLS

Languages: Python, C++, TypeScript, JavaScript (ES6+), Swift, Java, SQL.
AI & CG: LLM Agents, RAG, LangGraph, Chain-of-Thought (CoT), PyTorch, Reinforcement Learning, Gaussian Splatting, NeRF
Frontend: React Native, React, Vue.js, Redux, TailwindCSS.
Backend: Node.js, Express, WebSockets, PostgreSQL, MySQL, Redis Streams, AWS (Lambda, S3, EC2), GCP, MongoDB