Yupeng Lu

U.S. Permanent Resident | Greater Los Angeles Area | [Email](#) | [LinkedIn](#) | [GitHub](#)

Summary

Backend & Full-Stack Engineer | Expert in **Python, C/C++, cloud-native microservices (AWS, Kubernetes, Kafka)** | Experienced in high-performance distributed systems, real-time messaging, full-stack development, AI infrastructure, and data platforms.

Skills

- **Languages:** Python (AsyncIO), C/C++, SQL, JavaScript
- **Cloud & Infra:** AWS (Lambda, EC2, S3, CDS), Kubernetes (EKS), Docker, Terraform, Helm
- **Data & Messaging:** Kafka, Redis Streams, PostgreSQL, gRPC, Protobuf
- **Observability & Testing:** OpenTelemetry, Prometheus, Grafana, Pytest, Hypothesis
- **Core Competencies:** Distributed Systems, System Design, Concurrency, CI/CD

Experience

Huawei Technologies – Software Engineer, Distributed Systems & Data Platform | Beijing, China | Feb 2023 – Present

- Reduced P99 ingestion latency from 8 ms → 610 µs on 600k–2.2M events/s pipeline using **zero-copy shared memory + pybind11** and **sharded per-core counters**
- Delivered latency-aware tiered storage for **Kafka-compatible 160-node cluster** with exactly-once semantics; 99.99% messages ≤520 µs at 3M events/s peak
- Owned resilience & observability for 50+ gRPC services on Kubernetes/Istio
  - Rolled out coordinated circuit breakers & adaptive rate limiting via OpenTelemetry
  - Primary on-call 2023-2024; cut MTTR from 20 min → 3 min and reduced pager fatigue 70%
- Designed and shipped company-wide internal knowledge platform on Elasticsearch (12M+ docs)
  - Built crawler + incremental sync pipeline for Jira/Confluence/GitLab/Feishu
  - Maintain indexing SLA (99.9 % freshness < 3 s), handle daily re-index failures and user permission sync
- Optimized C-based virtual router data plane (MPLS/SRv6) using **AVX-512 + hugepages**; sustained 400 Gbps line-rate with per-packet metadata

GetDatelove – Full-Stack Engineer & Founder | Los Angeles, CA | Feb 2023 – Present

- Built international dating platform with **6 languages, real-time messaging, subscription payments**, **230K** lines of codes in total.
- Backend: **FastAPI + Redis + WebSocket** with multi-worker real-time messaging, read receipts, offline delivery, cross-device sync
- Frontend: **Vanilla JS**, supports media uploads, infinite scrolling, multi-language UX

The City Tutors – Software Engineer Intern | New York, NY | Mar 2022 – Dec 2022

- Refactored legacy Django; optimized DB schemas, reducing load time 40%

Education

M.S. Mathematical Finance & FinTech | Boston University | GPA 3.78
Focus: Computational Methods, Stochastic Calculus, Algorithmic Trading

B.A. Physics | The Ohio State University | GPA 3.84 | Dean's List, Merit Scholarship