Xiaochang Li

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EDUCATION

Carnegie Mellon University   Pittsburgh, PA
Master of Science in Information Technology – Mobility   August 2025 - May 2027

Fudan University   Shanghai, China
Bachelor of Science in Computer Science   September 2020 - August 2024
- Coursework: Data Structures & Algorithms (A), OOP (A), Computer Systems (A), Computer Networks (A)

SKILLS

Programming Languages: Python, C/C++, Golang, SQL, TypeScript
Frameworks & Libraries: Spring Boot, PyTorch, Pytest, Google Test, Spark (Core), DPDK
Tools & Platforms: Git, Linux, Docker, MySQL, AWS (EC2, S3, Lambda, ECS), Kubernetes, Kafka, GitLab CI/CD
Concepts: OOP, Data Structures & Algorithms, Software Testing, CI/CD, Pub/Sub, IPC, Distributed Systems

WORK EXPERIENCE

Tiktok   Shanghai, China
SOFTWARE ENGINEERING INTERN   December 2024 - April 2025
- Identified bottlenecks in test data/case management; built GitLab CI/CD workflows automating build, test (Pytest), and release, cut end-to-end duration by 20% and saving 250+ annual hours
- Spearheaded LLM-based DOM analysis framework generating 85% of functional test cases; authored 200+ backend Pytest suites, collectively increasing overall code coverage to 80%
- Collaborated with Product/UI to co-author 50+ API specs for Stream Resource features, ensuring clear contracts and cutting down integration friction

Xiaoyong Private Equity Funds (AUM $10B+)   Shanghai, China
SOFTWARE ENGINEER INTERN   June 2023 - September 2023
- Optimized IPC for high-frequency market data feeds by replacing UDS with DPDK/libmemif zero-copy channels, achieving 23% lower latency (2.4µs→1.84µs in bulk data transfers under localhost benchmark)
- Refactored messaging to custom C++ pub-sub model, decoupling producers/consumers and enhancing flexibility/scalability
- Authored 80+ Google Test suites for IPC libraries, achieving 85% coverage and enhancing robustness
- Automated partner report processing (Excel->MySQL with Pandas), eliminating 30 min/report manual effort

Kunming Psb   Kunming, China
SOFTWARE ENGINEER INTERN   June 2022 - September 2022
- Pioneered a 5-node distributed data platform using Hadoop/HDFS to explore scalable architectures for public safety data
- Engineered and honed Spark RDD pipelines to ingest and process daily records from web crawlers (Python) and APIs, enabling efficient batch analytics and trend identification
- Developed multi-source data aggregation pipeline using Kafka to ingest MySQL data from multi local bureaus
- Designed normalized database schemas and co-authored detailed API specifications for data access layer

KEY PROJECTS

XV6 Operating System | C++, Assembly
- Extended kernel with 16 new system calls, accomplishing core functionalities for process synchronization (wait, exit) and inter-process communication (IPC)
- Designed and executed a lazy memory allocation strategy to optimize page fault handling, reducing overhead of memory allocation and freeing operations by 15%
- Added support for hard and soft links within virtual file system (VFS) layer, boosting file management capabilities

COOL Compiler | C++, Flex, Bison
- Developed a full-featured compiler from scratch for a custom object-oriented language, implementing lexical analysis, parsing, semantic analysis, and MIPS code generation
- Engineered a robust error handling system capable of recovering from multiple errors in a single compilation pass and producing informative messages for 200+ distinct test cases
- Implemented key optimizations including constant folding and dead code elimination, to improve efficiency

HONORS & AWARDS

- Scholarship of Fudan University, Summer 2023
- Fudan Outstanding Student, Fall 2022