Jason Chou

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Experience

Senior Software Engineer, TRUE AI June 2021 - March 2025

- Architected a C#-based microservice scaling solution for processing documents that reduced SQL deadlock bottlenecks, increased throughput by 100x, and prevented enterprise contract churn.
- Migrated legacy Windows computer vision services to containerized Linux deployments, reducing deployment time by 91% and enabling horizontal auto-scaling across cloud environments.
- Led the adoption of distributed observability using OpenTelemetry, enabling the team to debug performance bottlenecks across microservices and reducing mean time to resolution (MTTR).
- Integrated flexible authentication layers (OAuth, JWT, and custom schemes for enterprise clients) in PII-sensitive environments to meet regulatory compliance standards.
- Mentored 5 junior engineers and supported their ramp-up through structured code reviews to becoming their own independent contributors and system owners.

Software Engineer, TRUE AI June 2019 – May 2021

- Architected front-end migration from desktop application to React SPA, eliminating client-side installations and increasing concurrent user capacity.
- Orchestrated lift-and-shift cloud migration strategy to AWS and Azure, improving system availability and disaster recovery capabilities.
- Resolved critical concurrency issues in C# WPF-based human-in-the-loop platform by implementing thread-safe patterns and async/await operations.

Undergraduate Student Researcher, CCNY AquaSim April 2018 - March 2019

- Optimized underwater wireless communication protocols by tuning transmission parameters (power, modulation, baud rate), reducing energy consumption and achieving 19% improvement in packet delivery.
- Developed a multi-channel MAC topology in ns-3 network simulator, analyzing traffic patterns with Python scripts and tcpdump.

Projects

Piecewise - Personal Outfit Tracking App

Python, Dagster, FastAPI, TypeScript, Next.js

- Implemented a visual inference pipeline that uses object detection and semantic segmentation models to detect, extract, and generate embeddings to efficiently match clothing items across multiple outfit pictures.
- Designed a backend architecture using a hybrid system of SQL and Neo4j databases to track item co-occurrence based on past user behavior and generate visual style metrics.

Lip Reading Model Optimization - Senior Project github.com/ccif/LipNet

Python, Keras, TensorFlow, Google Cloud

- Enhanced LipNet by implementing a novel method of curriculum training that speeds up convergence time.
- Streamlined interface for training different video formats and deployed it to Google Cloud for training and inference.

Skills

Languages: C#, Python, TypeScript, JavaScript, Bash
Frameworks: .NET Core, React, Node.js, FastAPI, Airflow, Dagster
Cloud: AWS (EC2, RDS, EKS, Lambda, FSx, CloudFormation), Azure, Google Cloud
Technologies: SQL, RabbitMQ, OpenTelemetry, Docker, Kubernetes, Terraform, Artifactory, Helm, gRPC, GitHub Actions, Jenkins

Education

City College of New York

Bachelor of Engineering in Computer Engineering Magna Cum Laude, May 2019