Jason Chou

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Experience

Senior Software Engineer, TRUE June 2019 - March 2025

- Designed and built a stateless scaling solution that increased document processing capacity by 100x, preventing system standstills from complex SQL deadlocks and retaining key enterprise contracts.
- Migrated and containerized legacy Windows computer vision modules to Linux using Docker, Kubernetes, and Helm, improving CI/CD flexibility, scalability, and speed.
- Introduced distributed observability using OpenTelemetry and Jaeger to debug performance bottlenecks across C# .NET Core microservices.
- Integrated flexible authentication layers (OAuth, JWT, and custom schemes) for client-deployed PII-sensitive environments to meet compliance standards.
- Spearheaded lift-and-shift migration to AWS (EC2, RDS, Lambda) and Azure, improving system availability and disaster recovery capabilities.
- Led UI modernization initiative, transitioning a legacy C# WPF desktop application that evolved into a React-based web solution. Eliminated per-machine installations which significantly increased concurrent user capacity and greatly reduced user onboarding times.
- Onboarded new engineers and supported their ramp-up to become independent contributors and system owners.

Undergraduate Student Researcher, CCNY AquaSim April 2018 - March 2019

- Improved the performance of wireless communication in underwater environments by adjusting optimal parameter settings such as message length, transmission power, modulation power, and baud rate
- Implemented a multi-channel MAC topology in ns-3 to conduct network traffic analysis using tcpdump and Python

Projects

Piecewise - Personal Outfit Tracking App

Python, Dagster, FastAPI, TypeScript, Next.js

- Building 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 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

- Optimized LipNet by implementing a novel method of curriculum training that speeds up convergence
- Streamlined the interface for training different video formats and deployed it to Google Cloud for training and predicting

Skills

Languages: C#, Python, TypeScript, Bash
Frameworks: .NET Core, React, Node.js, FastAPI, Airflow
Tools: SQL, AWS, Azure, Google Cloud, Docker, Kubernetes, Helm

Education

City College of New York

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