**Zhiheng Liu**

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**EXPERIENCE**

**TikTok Pte. Ltd** Aug 2021 - Present

Software Engineer @ Video Architecture

* Designed and implemented world-wide low-budget edge upload system. Relying on no-cloud-storage edge data-centres to fasten user’s upload speed by **avg. 6%** in weak-network regions.
* Revamped upload domain scheduling system to serve world-wide user traffic with better upload success rate and faster upload speed.
* Working together with ByteDance open-sourced http framework Hertz on content upload scenario. Improving framework stability and efficiency.

**SenseTime International Pte. Ltd** Jan 2020 - May 2021

Platform Software Engineer Intern @ AIoT platform

* Decreased cloud server load from **14,000** to **3,000** queries per second and reduced latency to **30%** for face recognition, by developing an AIoT database synchronization module in Golang to distribute cloud server workload to end systems.
* Fastened feature extraction speed by **500%** in CPU environment, by optimizing feature extraction to execute in parallel and deploy multi-pod service on K8S.
* Contributed to firmwide open-sourced AIoT communication platform, by implementing device management module and application management module in Golang.
* Eliminated manual data collection in production, by designing an automatic data collection module in Golang.
* Designed and implemented a general-purpose model performance monitoring and data collection AI system.

**Narus Knowledge Pte. Ltd** Feb 2019 - Oct 2019

Part-time Software Engineer @ Initial Core Team

* Built a knowledge management web application for Singapore Attorney-General's Chambers, by productizing a tag extraction BERT model and integrating with Elasticsearch, empowering lawyers to manage their knowledge on fingertips.
* Built a long sentence searching service for lawyers, by implementing a multi-match fuzzy string searching algorithm to achieve sentence and paragraph searching in long articles.

**Visa Inc.** May 2019 - Aug 2019

Software Engineer Intern @ Operation & Infrastructure

* Eliminated manual server monitoring, by proposing the solution on developing process, file system and memory monitoring services utilizing Prometheus node exporter.

**EDUCATION**

**Nanyang Technological University** Aug 2017 - June 2021

B.Eng. in Electrical and Electronic Engineering **Singapore Science and Technology Scholarship**

**GPA 4.92/5.00 Highest Distinction**

**Dean’s List 2018 2019 2021**

**PROJECTS**

**NTUVibe** July 2018 - Jan 2020

Creating a campus utility web app, serves **1000+** users daily at peak period, by implementing a schedule generator module and contributing to course content scraper module.

**Vedig** July 2019 - July 2020

Led a team of six on developing a school-sponsored information and event management Flutter/Django full-stack app.

**AWARDS**

**DBS pShift global hackathon**

Won first runner-up with prize for 25,000 USD by designing a mobile freelancer platform, which promises customer-worker consensus and content providing with recommendation system.