

# 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 2011**

## 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.