

# Xianglong Liu

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## Education

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**Carnegie Mellon University Silicon Valley (M.S. in Software Engineering)**

2019 - 2020

**University of Chinese Academy of Science (M.E. in Computer Science)**

2012 - 2015

**University of Science and Technology Beijing (B.E. in Computer Science)**

2008 - 2012

## Working Experiences

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### ByteDance

Beijing, China

SOFTWARE ENGINEER, BACKEND

Sep. 2017 - Aug. 2019

- Developed and operated highly scalable and robust microservices, to optimize the user experience for over **50 million DAU**.
- Designed and implemented systems based on private cloud infrastructures to deliver new features for biweekly iterations of our product.
- Built product metrics, data warehouses, and Launched A/B Tests to exploit product potentials.

### Sohu.com

Beijing, China

SOFTWARE ENGINEER, BIG DATA

Aug. 2015 - Sep. 2017

- Built highly reliable workflows for the ML model training and implemented a online prediction system to improve advertisement profits.
- Restructured the ETL(Extract-Transform-Load) process and implemented a web portal to visualize user action data.

### VMware

Beijing, China

MEMBER OF TECHNICAL STUFF INTERN

Nov. 2012 - May 2013

- Assisted to built migration and deployment tools for a open-source PaaS platform cloud foundry.

## Major Projects

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### Launched A Cross-Platform Video APP

ByteDance

RELATED TECH: GOLANG, RPC, MYSQL, REDIS, NGINX, DOCKER, CI/CD

- Designed and implemented backend microservices to serve the basic scenario of watching videos.
- Developed the content management system from ground up, enriching the video contents that users consume.
- Built the private networking architecture with external content partner, ensuring the security of content.

### Optimized Legacy Systems Performance

ByteDance

RELATED TECH: GOLANG, MYSQL, REDIS, PYTHON, A/B TEST

- Refactored API gateway module by changing **python** into **Golang** implementation, reducing **80%** server resource cost.
- Refactored user interaction module, adding local cache and sharding DB instances by which the throughput increased by **400%**.
- Leveraged unit tests, CI and CD to avoid unexpected defects introduced by refactoring.

### Optimized Advertisement CTR model training workflow

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RELATED TECH: AZKABAN, JAVA, HADDOP, SPARK

- Optimized the offline workflow of training advertisement CRT models by parallelizing independent Hadoop batch training steps, reducing about **35% running time**.
- Expedited online streaming workflow with **Spark-Streaming** and made it in compliance with different machine learning algorithms.

### Developed a personalized recommendation engine

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RELATED TECH: JVM, SPRING FRAMEWORK, ZOOKEEPER, CI

- Designed the architecture of the system and built the first online version from ground up.
- Set up continuous integration environment, reducing the deploying cost.
- Tuned JVM parameters to optimize the performance. Increased instance throughput by **20%**.