Xianglong Liu

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Education

Carnegie Mellon University Silicon Valley
Mountain View, CA

M.S. in Software Engineering
2019 - 2020

Major Course: Machine Learning, Distributed System, Foundation of Software Engineering, Software Requirement and Interaction Design

Working Experiences

ByteDance
Beijing, China

Software Engineer, Backend
Sep. 2017 - Aug. 2019

- Kept backend microservices running smoothly and scaling efficiently to optimize the user experience for over **50 million DAU**.
- Designed and delivered new features for biweekly iterations of our product, based on database, cache, gateway and other infrastructures
- Built product metrics ,data warehouses, A/B Test to exploit product potentials.

Sohu.com
Beijing, China

Software Engineer, Big Data
Aug. 2015 - Sep. 2017

- Built highly reliable model training workflows 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

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.
- Develped 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
Sohu.com

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
Sohu.com

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%**.