Yifei Li
EPFL Mater student
Major in Computer Science
Interested in System and AI

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Education

Bachelor of CS & Statistics, Zhejiang University Sep. 2016 - Jul. 2020
Master of CS, EPFL Feb. 2021 - Feb. 2023

Experiences

- **Hybrid Image-based Rendering for Large-scale Indoor Scenes** Dec. 2018 - Jul. 2020
  CAD&CG Key Lab, Zhejiang University; with Prof. Weiwei Xu *Research Assistant*
  - **Image-based Rendering integrated with Super-Resolution**: Introduced Super-Resolution into the IBR system. Reduce the memory footprint by nearly **1/4**.
  - **Photo-realistic video super-resolution**: Trained a video super-resolution model with discrete scene images by utilizing scene geometry. Leveraged generative adversarial learning to boost the realism of super-resolved images. Designed an efficient framework which produces **20 FPS** video stream with only **3M** weights.
- **ByteDance** May. 2020 - Nov. 2020
  Data Arch Group *System Engineer Intern*
  - **Iterate serving layer of Ticktok push system**: We firstly realize the **trigger mode** of the push system, aiming at faster push notification for scenarios like livecast, which involves nearly **500,000** QPS during the evening.
  - **Streaming data processing framework**: Help maintained the performance of the framework. Independently migrated it from Python to Golang and refactored the framework with its concurrency pattern, leading to **10x faster** speed and **1/2 memory cost**.
  - **CUDA programming training**: Finished the NVIDIA DLI training courses and gained the certificate.
- **SIGMOD 2021 Programming Contest** Apr. 2021 - May. 2021
  SIGMOD conference *Team member of CyberPunk2021*
  - **Entity resolution on various domains**: Reduce the Entity Resolution to a classification problem on similarity space. Achieved **94.5%**, **99.0%** and **90.2%** F1-score on three different dataset respectively.
  - **Rank 4 / 27, selected as finalists solution(5 teams)**: We ranked 4 among nearly 30 participating teams, and our solution has been selected as representative finalists.

Academic Projects

- **MonsterSQL** – C++, SQL(Database Systems) https://github.com/Yeeef/MonsterSQL
  Designed and implemented a mysql-like database system with B-plus tree. (10w insertion in 1min).
- **MipsPLS** – C++, Qt(Computer Organization) https://github.com/Yeeef/mips_assembler
  Implemented a MIPS assembler with Qt to translate MIPS code to hex code and vice versa.
- **Pascal Compiler in Python** – Python(Compiler Principle) https://github.com/Yeeef/SOUP
  Supported symbol table construction, intermediate code generation and optimization techniques.
- **MVSNet reproduce** – Python, Tensorflow(Artificial Intelligence) https://github.com/Yeeef/MVSNet
  Reproduced MVSNet(ECCV2018) in a new framework - TensorPack, tested with real-world images.
- **Big-data Analytics** – Scala, Python(Advanced Practices on Big Data Applications)
  https://yeeef.github.io/2020/03/13/Big-Data-projects/
  Got hands dirty on typical Big-data tools like MapReduce, Spark, Flink Hbase, Hive, Kafka on 5 real distributed servers. Implemented K-Means, Naive-bayes, Random Forest from scratch. Finished several big-data analytics projects.

Skills

Programming Language: Python, Go, C/C++, Scala, SQL
Miscellaneous: Git, Latex, CUDA, HDFS, Spark, Pytorch, Tensorflow, MATLAB, Qt, OpenCV, MeshLab