

XI YANG

young.moe

Room 9217, TASC1, 8888 University Drive, Burnaby, BC, Canada

xya81@sfu.ca

EDUCATION

Simon Fraser University, Canada

Bachelor of Science, in dual degree program with ZJU
Major in Computing Science, Minor in Mathematics

Aug 2017 - Current
Overall GPA: 3.67/4.33

Zhejiang University, China

Bachelor of Engineer, in dual degree program with SFU
Major in Computer Science

Aug 2015 - Current
Overall GPA: 3.61/4.00

RESEARCH EXPERIENCE

Database System Lab @ Simon Fraser University

Undergraduate Research Assistant

Nov 2017 - Current

- Research focused on interactive online analytic processing(OLAP) systems for big data.
- Works involved Approximate Query Processing system over key-value stores and Online Aggregation system with partitioning and precomputation.
- Supervisor: Jiannan Wang

SELECTED PROJECT EXPERIENCE

Online Aggregation System

Research Project @ Database System Lab, SFU

May 2018 - Present
Simon Fraser University

- Extended to support streaming data processing by using time windows.
- Using regression trees to split data into partitions, precompute aggregate functions for each partition.
- Run aggregation by optimally allocating sample budgets to partitions partially covered by query.
- Built in Scala with Spark. Supporting both HDFS and disk file systems.

Approximate Query Processing System for Key-Value Stores

Research Project @ Database System Lab

Nov 2017 - Present
Simon Fraser University

- Investigated existed methods for running SQL query over key-value stores
- Achieved accelerating sampling in key-value stores by modifying data structures. [Poster available.](#)
- Explored solving sequential sampling bias problem on key-value stores.

Fantasy Danmaku

Personal Project

Sept 2017 - Dec 2017

- A background screen control system for live performance built in Golang with Web Socket.
- Supports displaying real-time comments(danmaku) sent by audiences.
- Comes with more user-live interactions and real-time data analysis
- Successfully applied in two lives with more than 500 audiences. [Code available.](#)

3D Renderer

Computer Graphics Course Project

Sept 2017 - Dec 2017
Simon Fraser University

- Implemented 2D drawing by pixel-level operation, then 3D rendering with transformations and perspective projection based on 2D drawings.
- Implemented OBJ file parsing and a 3D scene description language.
- Implemented Flat, Gouraud and Phong shader.

Mini SQL

Database Systems Course Project

Apr 2017 - Jul 2017
Zhejiang University

- Implemented a database management system with SQL support in C++
- Supporting table management and CRUD operations on table.
- On-disk data storage with B+ tree index available for each table.
- Achieved >100k/s record insertion on a desktop computer.

MIPS CPU with SoC

Computer Organization Course Project

Mar 2017 - June 2017
Zhejiang University

- Implemented a CPU supporting partial MIPS instruction set in verilog.
- Accompanied SoC supports VGA output, RAM and ROM for CPU, I/O bus and multiple I/O interfaces including PS/2 input.
- CPU and SoC verified on Xilinx Kintex-7 FPGA.

Fantasy Enrollment

Personal Project

Jul 2016 - Sept 2016

- A new member recruit and interview website for ZJU Anime club.
- Using koa.js framework and MongoDB for backend.
- Serves complete enrollment process, including administrator operations, automatic interview scheduling, interview comment, enrollment data analysis.
- In service and maintained until now, enrolled more than 1000 members in total.

ACHIEVEMENTS AND AWARDS

2018 ACM / ICPC Pacific NW Regional competition division 1 - Team ranking : 20 / 61

2018 Fall - Simon Fraser University - Open Scholarship & Dean's Honour Roll

2017 ACM / ICPC Pacific NW Regional competition division 2 - Team ranking : 5 / 94

2017 Simon Fraser University - SFU-ZJU Dual Degree Program Entrance Scholarship

2017 The Mathematical Contest in Modeling (MCM) - Honorable Mentioned

EXTRA-CURRICULAR EXPERIENCE

Computer Maintenance, Administrator and Lecturer

Electrical Volunteer Association

Sept 2015 - June 2017
Zhejiang University

- Maintain and repair computers, solve computer-related issues for everyone in ZJU, manage servers for organizations.
- Leading the team, organizing events, teaching freshmen in second year.
- Gave more than 10 talks to different student groups with varied computer-related topics.