

ZHENGYUAN ZHANG

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EDUCATION

University of Michigan

B.S. in Computer Science

Ann Arbor, MI

Sept 2018-Apr 2020

- GPA: 3.92/4.0
- Coursework: Operating Systems, Database Management Systems, Computer Security, Data Structures and Algorithms, Computer Organization.

UM-SJTU Joint Institute

B.S. in Electrical and Computer Engineering

Shanghai, China

Sept 2016-Aug 2020

- GPA: 3.59/4.0
- Coursework: Programming and Data Structures, Logic Design, Signal and Systems.

EXPERIENCE

University of Michigan Center for Ergonomics

Research assistant

Ann Arbor, MI

Oct 2018-Present

- Used OpenGL and MFC to fix bugs and develop new functionalities for 3D Static Strength Prediction Program.

PROJECTS

University of Michigan EECS

Course Project: Pager

Ann Arbor, MI

March 2019

- Led a group of 2 members. Implemented a memory pager based on a virtual MMU with only read_enable and write_enable flags.
- Maintain the state of physical pages by triggering page faults. Implement clock algorithm. Support fork and copy-on-write. Minimize disk I/O and page copy to improve performance.
- Adopt an object-oriented strategy. Enforce encapsulation to increase maintainability.

Course Project: SillyQL

Nov 2018

- Implemented a simple relational database using C++, which supports non-nested insert, delete, select, and join.
- Support multiple indices (hash based index or binary tree based) on each table. Defer updates on indices to improve performance.

Course Project: LC2K ISA

Sept 2018-Dec 2018

- Implemented an assembler and a linker for LC2K ISA using C.
- Implemented a simulator for LC2K ISA using C. The simulator simulates a machine with a 5-stage detect&forward pipeline and user-specified cache configuration.

UM-SJTU Joint Institute

SJTU Freshmen Robotics Competition

Shanghai, China

Mar 2017-Apr 2017

- Worked in a team of 8 members. Designed and implemented a robot to catch and transport various objects. Won championship.
- Designed the frame of the robot. Communicated with all the members to make sure that everyone's part fits in the frame.

Course Project: Parking Lots System

July 2017-Aug 2017

- Led a group of 4 members. Designed and implemented a parking lot system using C++, and visualized a parking lot using OpenGL.
- Designed the interfaces of all the classes. Implemented all the base classes.

SKILLS

- **Platforms:** Arduino, FPGA Board, Linux, Windows.
- **Languages:** C++, Python, C, SQL, Java, Verilog, MatLab, L^AT_EX.
- **Applications:** AutoCAD, Blender, NI Multisim, OrCAD, Origin, Unity, Vivado, Wireshark.