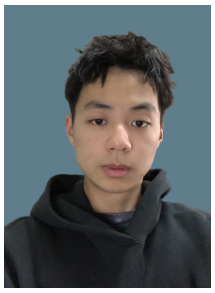
YANG YANG



PERSONAL INFORMATION

birth	*Born in China*, September 2001
personal email	jluelioyang2001@gmail.com
official email	yangyang1519@mails.jlu.edu.cn
website	https://elio-yang.github.io/
github	https://github.com/Elio-yang/
blog	https://www.cnblogs.com/oasisyang/
phone	(+86) 137 8668 9751

EDUCATION

Undergraduate

Jilin University, Changchun, China
February 2019–Present (junior)
GPA: 3.67/4.0
Rank: 10%
Major: Computer Science and Technology
Interests: Operating System, Computer Architecture and HPC.

RESEARCH EXPERIENCE

ETECA Lab

Emerging Technology Enabled Computer Architecture, Jilin University
February 2022–Present
Lab Website: here
Advisor: Prof. Jingweijia Tan
Research on: Computer architecture & High-Performance Computing

In a nutshell, I am doing research on the **microarchitecture** of General-Purpose Graphics Processing Unit (**GPGPU**). Some classic problem like **scheduler** and **memory system** design are under consideration. Due to the **FinFET** and state-of-the-art **chiplet** (based on package-level integration), nanometer scale is much more reachable, as a consequence, **process variation** is more complex than before. Hence I have also been doing research on **hardware variability** related on Multi-Chip-Module(**MCM**) GPUs.

SKILLS

Programming Languages

C/C++, Assembly(x86, RISC-V), Go
CUDA
Python

Hardware

HDLs: Verilog
Modelsim
Basic analog circuit design

Software

LINUX/UNIX/Windows
GIT
GNU compiler (gcc)

AWARDS

Undergraduate Academic Year Scholarship

Fall 2020 · The First Prize Scholarship

Fall 2021 · The Second Prize Scholarship

PROJECTS

EOS

EOS is a 32bit ***nix** operating system using **x86** instruction set. Though it's a toy model OS, EOS contains a basic **bootloader**, 2-level **paging**, 4GB **memory management** support and **kenel-multithreads**. For user environment, it provide a set of traditional shell programs and **multi-process** mechanism. It follows the x86 ABI, so it's easy to port thoses x86 applications. This project is still *active* and it will provide a glibc-like library and compiler support. You can find the codes here.

WYZ-BAR — ***WYZ-BAR*** is a bar management system with **multi-process** organization and a simple builtin **relational-database**. WYZ-BAR is a *collaborative project* (WYZ stands for 3 members) and I am the leader. WYZ-BAR is my *first* project in my university life and the development flow follows the modern **free** softwares' way. A lot of **parsing** techniques were used to deal with all kinds of data input, this system is specially optimized for unqualified input like the real world. You can find the codes here.

CUDA-FFT — ***CUDA-FFT*** is a CUDA version of the **Fast Fourier Transform** algorithm. This project implemented 3 ways to do the *polynomials multiplication*, including ordinary multiplication, **recursive-FFT** and **gpu-FFT**. The performance was well tested and the contrast was shown in the report. This is my first time doing heterogeneous computing and this project lead me to the research of **HPC & GPGPU**. You can find the codes, slide, and report here.

Others — You can find more projects including course labs (like MIT 6.828) and an Android application(SmogDetector) in GitHub

OTHER INFORMATION

Languages — Chinese · Mothertongue

English · Intermediate (conversationally fluent)

Interests — Literature (Latin-American, magic realism) · West Coast · Running

Characteristic — Strong patience, communication, and collaboration skills.