Fan Yang

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EDUCATION

Tongji University   Sept. 2019 - Jun. 2023 (Expected)
B.Eng. in Computer Science And Technology

- **GPA**: 89.01/100
- **Core Coursework**: Data Structures (A), Operating Systems (A), Principles of Database Systems (A), Software Engineering (A), Principles of Compilers (A), Algorithm Analysis and Design (A) and others
- **Awards**: Second Prize of Shanghai Competition Area in China Undergraduate Mathematical Contest in Modelling 2021

EXPERIENCE

eBay (Core AI team)   Oct. 2022 - Present
Full Stack Software Engineer Intern

- Established unit test coverage using Jest for automated testing of front-end functionalities of eBay's AI platform
- Prioritized tests for legacy code to reduce the possibility of performance regression after refactoring
- Deployed the mirror environment based on real-time production environment through eBay cloud platform traffic mirror
- Tested and improved the service efficiency through monitoring server load and optimizing queries
- Developed reusable responsive components of eBay's AI platform with React.js

Axioms Capital Management   Jul. 2021 - Aug. 2021
Intern

- Maintained and optimized a back-testing system for better performance
- Built a Multi-factor investment model with Python and gained considerable rate of return with trading demo accounts, achieving 13% annual rate of return in contrast to the CSI 500 Index average return

SELECTED PROJECTS

Group Project Management System - JavaScript/Python
Group Leader

- Developed a comprehensive web system deployed on server where users could manage group work by arranging group tasks, group members, and group files. Built the system with Flask, Redis and MySQL
- Conceptualised the database data model and ensured that data objects are normalised and well-abstracted
- Led group members to apply agile development practices using GitLab
- Designed the UI and implemented websites & the front-end infrastructure with Vue.js

An UnixV6-like file system - C++

- Designed and implemented a two-level inode storage and directory structure based on the Unix V6 file system
- Devised a user group system which supports read and write file based on user privileges
- Used mutexes and condition variables to implement synchronization barrier and read/write locks
- Implemented from scratch several unix commands including ls, cd, chgrp and C library functions like fopen, fseek, fclose

MIPS-54 Five-Stage Pipelined CPU - Verilog

- Implemented a five-stage (Fetch, Decode, Execute, Mem, WB) pipeline CPU based on MIPS-54 architecture design
- The CPU takes hexadecimal code (decoded from MIPS assembly language) as input and runs on Xilinx FPGA
- Integrated a bi-mode local branch predictor and a branch target buffer in the pipeline, improved 25% performance in total cycles

TECHNICAL SKILLS

- **Programming Languages**: JavaScript, TypeScript, C/C++, Python (Pandas, NumPy), Verilog, SQL, HTML, CSS
- **Framework & Tools**: Vivado, Git, React.js, Vue.js, Node.js, Express, Flask, MySQL

ACTIVITIES

- Served as Secretary of the Sports Department in the Student Union of School of Electronics and Information Engineering, Tongji University, and was in charge of organizing several events like the Sports festival of SEIE academy
- Attended the 2021 CCF Big Data Computing Intelligence Contest, and was part of the top 7.42% of participants