# ZINAN LI

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#### **EDUCATION**

## Southern University of Science and Technology

Shenzhen China

Bachelor of Computer Science And Technology

Sep. 2020-Expected Jun. 2024

- Overall GPA 3.64/4.0 (87.91/100)
- Advanced Courses: Analysis of data structures and algorithms, Discrete mathematics, Principles of computer organization, C/C++ programming, Computer network, Artificial Intelligence

## University of Oxford/Oxford International Study Abroad Program

Jan 2022

- Coursework: Artificial Intelligence & Machine Learning
- GPA: 4.0/4.0

## University of California, Irvine/Academic Study Abroad Program

Sep 2023-Present

#### **PUBLICATION**

Lin, Y., Li, H., Liu, H., Shu, H., Li, Z., Hu, Y., & Liu, J. (2023). Domain adaptative retinal image quality assessment with knowledge distillation using competitive teacher-student network. In 2023 IEEE 20th International Symposium on Biomedical Imaging (ISBI). IEEE.

Heng, L. Ziqin, L., **Zinan, L.**, Huazhu, F., Zhongxi, Q., Yan, H., Jiang, L. (2023) Enhancing and Adapting in the Clinic: Test-time Adaptation for Medical Image Enhancement. IEEE Transactions on Medical Imaging.(under review)

## PROJECT EXPERIENCE

#### National College Students Innovation Training Programme

Apr 2022 - Present

- Built a website that uses deep learning models to enhance fundus images of cataract patients
- Served as both the full-stack developer and project leader
- Applied for software copyright for the project

### Code hosting platform

Sep 2022 - Jan 2023

- Implemented version management with support for branch management and code rollback.
- Developed backend using microservices architecture, with nacos+dubbo+spring cloud+springboot+mysql technologies.
- Implemented user management, including user registration and login, personal profile display, and open-source community development activities such as PR, issue, fork, etc.
- Implemented code repository management with a user-friendly graphical interface for remote repository creation and deletion, file uploading and downloading, command-line operations, and basic repository page display and permission management.

## CPU Based on Extended MINISYS ISA

Feb 2022 - Jun 2022

- Designed and implemented a MIPS CPU with pipeline and cache using Verilog HDL as a course project.
- Improved CPU performance by adding forwarding unit, hazard detection unit, and branch prediction unit to the five-stage pipeline.
- Simulated a direct-mapped cache with write-back policy and verified its functionality and efficiency.
- Documented the design process, challenges, solutions, and results in a comprehensive report.

# Hand Gesture Human-Computer Interaction (HCI) system

Feb 2022 - Jun 2022

• Designed and implemented a human-computer interaction (HCI) system that can recognize hand gestures using C++, OpenCV, and Qt framework.

- Used a skin color filter to improve the accuracy of hand detection and mapped different gestures to different commands that can be executed by the GUI module.
- Tested and evaluated the system's performance in terms of accuracy, robustness, latency, and compatibility using various scenarios and metrics.

## Reverse Reversi AI Agent

Sep 2022 - Dec 2022

- Developed an artificial intelligence agent that can play reverse reversi using Python
- Implemented minimax algorithm and alpha-beta pruning to optimize the agent's decision making process
- Achieved an average win rate of 85

## Parking Lot Management System

Mar 2022 - Jun 2022

- Designed and implemented an Parking Lot Management System using Verilog HDL and Xilinx Vivado software
- Programmed a digital signal processing system using FPGA that accepted input and output using button and keyboard and trumpet devices
- Tested and verified the functionality of the system using simulation tools and FPGA board

### TEACHING EXPERIENCE

# Student Assistant for "Fundamentals of Computer Programming A"

- Assisted the teacher in generating test questions and grading assignments
- Tutored students in completing programming assignments
- Answered student questions and provided feedback

#### AWARDS & HONORS

 $3^{rd}$  prize of college scholarship of Southern University of Science and Technology Sep 2021 - Sep 2022  $2^{nd}$  prize of freshman scholarship of Southern University of Science and Technology Sep 2020 Honorable Mention of Mathematical Contest In Modeling Feb 2022

#### **SKILLS**

Python, C/C++, Java, JavaScript, Photography