

ZHIRONG CHEN

Email: zhirong.20@intl.zju.edu.cn ◇ Phone number: 17727406580 ◇ Website: rong-hash.github.io

EDUCATION

Zhejiang University

Undergraduate in Electrical and Computer Engineering

Sep. 2020 - May. 2024

GPA: 3.92/4 Rank: 3/63

University of Illinois at Urbana-Champaign

Undergraduate in Computer Engineering

Sep. 2020 - May. 2024

GPA: 4/4

PUBLICATION

[Pub1] **Zhirong Chen**, Haohan Wang. Mixed Model Personalized Regression Unveils Precise Alzheimer's Genetic Discovery. Submitted to *Bioinformatics*.

[Pub2] One paper submitted to *KDD*, double blind review.

SELECTED PROJECTS AND RESEARCH

Project Zinix: A Linux-like Operating System

Supervisor: Prof. Zbigniew Kalbarczyk and Steven Lumetta, *UIUC*

Oct. 2022 - Dec. 2022

- Scheduler, Multiterminal, VRTC, and Signals Support
- Essential Drivers (RTC, Keyboard, Sound, etc) and System Calls
- Customized File System, Writable Disk

Project Tank World: A FPGA Based Video Game

Supervisor: Prof. Zuofu Cheng, *UIUC*

Mar. 2023 - May. 2023

- Multi-player digital circuit logic, Numerous War Maps
- Essential Drivers (Keyboard, Sound)

Project Certainty amidst Uncertainty: Educated Guesses of Asset Prices and Investment Decisions

Supervisor: Prof. Thomas Honold, *Zhejiang University*

Dec. 2021 - Feb. 2022

- Combined the Grey Model and Neural Network to predict the price of bitcoin and gold
- Applied improved Capital Asset Pricing Model (CAPM) to balance the risk and profit
- Tested the model on the data from 2015 to 2020 and got steady and huge profit
- I designed the investment strategy of the model. The improved CAPM strategy defeated 99% of models (approximately 30000 teams in total) in the Mathematical Contest In Modeling.

Research Intern Personalized Alzheimer's Genetic Uncovery

Supervisor: Prof. Haohan Wang, *UIUC*

Dec. 2022 - Present

- Improved the model performance, experiment design, and paper writing
- Submitted a paper (First Author) to a top-tier journal *Bioinformatics*

Research Intern ShapeNet: Shapelet Graph Attention Network

Supervisor: Prof. Yang Yang, *Zhejiang Univerisity*

May. 2022 - Aug. 2022

- Took use of the Dynamic Time Warping Distance based Kmedians to cluster the time series
- Extracted the shapelets of time series by choosing the center of each cluster, doubled the speed of extraction
- Constructed the Graph Attention Network to train and classify the time series

Research Intern AI Net Lab, *Zhejiang University*Supervisor: Yuxuan Cao, *Zhejiang University*

March. 2023 - May. 2023

- Design and implement a web application for the model
- Submitted a paper to a top-tier conference *KDD*

Research Intern Unsupervised Pre-training Improves Tooth Segmentation in 3-Dimensional Intraoral Mesh ScansSupervisor: Prof. Zuozhu Liu, *Zhejiang University*

Jun. 2021 - Mar. 2022

- Applied MAE (mask autoencoder) to pretrain the network on 3D point cloud data
- Applied DGCNN with contrastive learning to teeth segmentation

HONORS

- 2022 First-class Scholarship of Zhejiang University (**Top 3%**)
- 2022 Scholarship from the government of Zhejiang Province (**Top 5%**)
- 2022 ZJUI Academic Scholarship - Second Prize (**Top 3%**)
- 2022 Outstanding Students of Zhejiang University
- 2021 First-class Scholarship of Zhejiang University (**Top 3%**)
- 2021 Scholarship from the government of Zhejiang Province (**Top 5%**)
- 2021 ZJUI Academic Scholarship - Second Prize (**Top 3%**)
- 2021 Outstanding Students of Zhejiang University
- 2021 Outstanding Individual in Community Service of Zhejiang University

COMPETITIONS AND PRIZES

- 2022 **MCM** (International Mathematical Contest In Modeling) **Finalist (Top 1%)**
- 2022 **CMC** (Chinese Undergraduate Mathematics Competition) **First Prize (Top 5%)**

SKILLS

Programming Languages	Python, C, C++, X86, SystemVerilog, SQL, MongoDB, Neo4j, JavaScript
Tools	MySQL Workbench, Pytorch, Latex, Qemu, FPGA, Quartus, Flask, NodeJS
Research Interest	Machine learning in system, Biological computation
Languages	Mandarin (Native), English (TOEFL: 109)

EXPERIENCE

Team Leader	May 2021 - Sep 2021
Community Service	<i>Yunnan Province</i>

- Volunteer teaching in Minzu Primary School, Xinmin Primary School
- Live streaming e-commerce of local agriculture products
- Propagation with text media and video media

Host	Sep 2021 - Sep 2022
Host Team in Zhejiang University	<i>Zhejiang Province</i>

- Host Undergraduate Commencement Ceremony
- Host Meadow Music Festival
- Host Campus Dubbing Competition