

ZHIRONG CHEN

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EDUCATION

Bachelor of Science | Electrical and Computer Engineering

Sep. 2020 – June 2024

Zhejiang University (GPA: 3.92/4 Rank: 3/64)

Zhejiang, China

Visiting Student | Computer Engineering

Aug. 2022 – May 2023

University of Illinois at Urbana-Champaign (GPA: 4/4)

Illinois, United States

PUBLICATION

[Pub1] Zhirong Chen, Haohan Wang. Heteroscedastic Personalized Regression Unveils Genetic Basis of Alzheimer's Disease Stratified by Cognitive Level. Submitted to *Bioinformatics*.

[Pub2] One paper ready to submit to *TKDE*.

SELECTED PROJECTS AND RESEARCH

Personalized Alzheimer's Genetic Uncovery

Dec. 2022 – Present

Supervisor: Prof. Haohan Wang, UIUC

- Research in personalized model to unveil the personalized Alzheimer's genetic factors
- Submit a paper to *Bioinformatics*

Zinx: A Linux-like Operating System

Oct. 2022 – Dec. 2022

Supervisor: Prof. Zbigniew Kalbarczyk and Steven Lumetta, UIUC

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

Tank World: A FPGA Based Video Game

Mar. 2023 - May. 2023

Supervisor: Prof. Zuofu Cheng, UIUC

- Hardware acceleration of game engine, parallel processing
- VGA & peripherals (Keyboard, Sound)
- SoC software & hardware programming

Educated Guesses of Asset Prices and Personalized Investment Decisions

Dec. 2021 - Feb. 2022

Supervisor: Prof. Thomas Honold, Zhejiang University

Zhejiang, China

- Applied improved Capital Asset Pricing Model (CAPM) to balance the risk and profit
- Combined the Grey Model and Neural Network to predict the price of different assets
- Won Finalist prize (Top 1%) in MCM (International Mathematical Contest In Modeling)

ShapeNet: Shapelet Graph Attention Network

May. 2022 - Sep. 2022

Supervisor: Prof. Yang Yang, Zhejiang University

Zhejiang, China

- Took use of the Dynamic Time Warping Distance based Community Detection to cluster the time series
- Extracted the shapelets of time series by choosing the center of each cluster
- Constructed the Graph Attention Network to train and classify the time series

Research Intern - AI Net Lab

Mar. 2023 - Present

Supervisor: Yuxuan Cao, Zhejiang University

Zhejiang, China

- Designed and implemented a web application for the AI model
- Ready to submit a paper to *TKDE*

Unsupervised Pre-training Improves Tooth Segmentation in 3D Mesh Scans	Mar. 2021 - Mar. 2022
Supervisor: Prof. Zuozhu Liu, <i>Zhejiang University</i>	Zhejiang, China

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

HONORS AND AWARDS

Zhejiang University Scholarship - First Prize	2021, 2022
Top 3% students in Zhejiang University	
Scholarship from the Government of Zhejiang Province	2021, 2022
Outstanding students in Zhejiang	
ZJUI Academic Scholarship - Second Prize	2021, 2022
Top 3 students in Electrical and Computer Engineering major	
Outstanding Students of Zhejiang University	2021, 2022
Remarkable students in Zhejiang University	
Academic Excellence Award	2021, 2022
Award to students with outstanding academic performance in Zhejiang University	
Student Volunteer Award	2021, 2022
Unparalleled student volunteers in Zhejiang University	
Dean's List	2021, 2022
Students with top 20% GPA in UIUC	
Student Innovation and Entrepreneurship Award	2022
Present to students with exemplary students in Zhejiang University	
Outstanding Individual in Community Service of Zhejiang University	2021
Distinguished students in summer social practice of Zhejiang University	
First Prize of Social Practice in Zhejiang University	2021
Exceptional social practice team in Zhejiang University	

COMPETITIONS

Finalist Prize, MCM (International Mathematical Contest In Modeling)	2022
Top 1% team among over 30000 teams	
First Prize, CMC (Chinese Undergraduate Mathematics Competition)	2021

SKILLS

Languages: Chinese (Native), English (TOEFL: 109)
Programming: Python, C, C++, X86, SystemVerilog, SQL, MongoDB, Neo4j, JavaScript
Tools: MySQL Workbench, Pytorch, Latex, Qemu, FPGA, Quartus, Flask, NodeJS, Docker

EXPERIENCE

Team Leader	May. 2021 - Aug. 2021
Community Service	Yunnan, China
<ul style="list-style-type: none"> • Volunteer teaching in Minzu Primary School, Xinmin Primary School • Live streaming e-commerce of local agriculture products • Propogation with text media and video media 	
Host	Sep. 2021 - Sep. 2022
Host Team in Zhejiang University	Zhejiang, China
<ul style="list-style-type: none"> • Hosted Undergraduate Commencement Ceremony • Hosted Meadow Music Festival • Hosted Campus Dubbing Competition 	