

ZHIRONG CHEN

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EDUCATION

University of Illinois at Urbana-Champaign

Undergraduate in Computer Engineering (First degree)

Sep. 2020 - May. 2024

GPA: 4/4 Rank: 1

Zhejiang University

Undergraduate in Electrical and Computer Engineering (Second degree)

Sep. 2020 - May. 2024

GPA: 3.92/4 Rank: 3/63

SKILLS

Programming Languages

Python(proficient), C(proficient), C++, X86, SQL, JavaScript, SystemVerilog

Research Interest

Machine learning in Quantitative Trading, Deep Learning in Time Series Classification

Language

Mandarin, English (**TOEFL: 109**)

PROJECTS

Project 1 Certainty amidst Uncertainty: Educated Guesses of Asset Prices and Investment Decisions

Supervisor: Thomas Honold *Professor, 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.

Project 2 AqoursNet: Autoencoded Quantification of Unsupervised Representative Shapelets Network

Supervisor: Yang Yang *Associate Professor, 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

Project 3 Unsupervised Pre-training Improves Tooth Segmentation in 3-Dimensional Intraoral Mesh Scans

Supervisor: Zuozhu Liu *Member, IEEE*

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
- Fed the model with different size of data to test the performance of network

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 Placement of Zhejiang University

COMPETITIONS AND PRIZES

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