

Ruan Weilin — Curriculum Vitae

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Education

Jinan University

Bachelor, Network Engineering of Computer Science Department

English language proficiency: IELTS 6.5(6.5 8.0 6.0 6.0)

Sep 2020-Jun 2024

Guangzhou

GPA: 3.7(5.0) or 87(100)

- Data Structure Exp. 99, Algorithms Analysis & Design Exp. 99, AI Principles 94, Computer Networks 92
- English in Computer Science 96, Technique for Software Testing 96, Probability and Statistics 91

Competition Experience

2020-2022: 3 Bronze Medals: The ICPC International Collegiate Programming Contest (**ACM-ICPC**) 45-47th

Spring 2022: 1 Silver Medal & 2 Bronze Medals: China Collegiate Programming Contest (**ACM-CCPC**)

Spring 2023: Honorable Mentions: The Mathematical/Interdisciplinary Contest in Modeling (**MCM/ICM Top 25%**)

2021-2023: 2 National Second Prize & 2 Provincial First Prize: Professional Software Engineering LanQiao Cup Final Contest

2021-2023: 1 Champion & 2 Second Prize: University-level ACM Programming Contest

2022: 1 Gold Medal & 1 Silver Medal: National University Student Algorithm Design and Programming Challenge(**Top 5%**)

2024: Third Prize: Huawei Software Elite Challenge (**Top 64 rankings**)

2023: Third Prize: International English Vocabulary Challenge for College Students (IEVCCS)

Research & Projects Experience

ARIMA-LSTM-XGBoost Combined Forecasting Model of Wheat Price

Winter 2020-Spring 2023

Jinan University

- **Province-level project finished:** College Students' Innovative Entrepreneurial Training Plan Program
- Build a multivariate forecast combination model based on the core's three models of ARIMA, LSTM, and XGBoost.

ViT Model-based Medical Image Assisted Diagnostic System

Spring 2023-now

Jinan University

- **University-level third prize:** "Challenge Cup" National College Student Business Plan Competition
- Contribution: Project manager (first author)
- Apply the Vision-Transformer(ViT) model to the medical field to process different types of medical images.

Intelligent complementary diagnosis of degenerative OA following TCM thinking

Spring 2023-now

Jinan University

- School-level project: Leader
- The pulse diagnosis and tongue color of Chinese medicine can better reflect the characteristics of some bone and joint diseases, which has great analytical value and potential for exploration.

Interpretable Multimodal Sentiment Analysis Models for SMARTHOME

Fall 2023

Hong Kong University of Science and Technology(GZ)

- Participated in the RBCC offline held in HKUST(GZ) and achieved outstanding camper.
- Feature extraction, feature fusion to train a multimodal sentiment analysis model for processing and predicting sensing data provided by smart home devices and providing proactive care.

ST-LoRA: Low-rank Adaptation for Spatio-temporal forecasting

Fall 2023-now

Hong Kong University of Science and Technology(GZ)

- Currently contributing as first author to **ECML-PKDD** (CCF-B Conference) and the paper is under review.

Academic Awards

Fall 2023: Golden Arowana Scholarship(**TOP 1%**)

Fall 2023: Excellent Student Cadre Title of Jinan University.(**TOP 5%**)

Fall 2022: Excellent Student Cadre Title of Jinan University.(**TOP 5%**)

Fall 2022: Outstanding students of Jinan University **First-class** scholarship.(**Top 10%**)

Fall 2021: Outstanding students of Jinan University **Second-class** scholarship.(**Top 20%**)

Internship Experience

Algorithm Learning Engineer

Fall 2021

Guangzhou Sesame Coding Education Technology Co., Ltd.

- **Job Description:** The study and innovation of algorithms for programming competitions and the provision of educational resources and services such as course tutorials and OJ testing platforms.
- **Personal Performance:** Prepared contest questions, generated test data, and created explanations and thought starters, relying heavily on C++/Python (Cyaron library) environments for data generation; participated in the development of the Online Judge website (Hydro framework) and daily maintenance using Linux.

A Graph Learning Study of Long-tailed Distributions

Spring 2023

Sun Yat-Sen University

- **Research intern** in Sun Yat-sen University **GEAR (Graph IEARning) group**
- **Individual performance:** mainly researched the related literature in the direction of GL/DL; studied the long-tail effect and OOD problem of graph-structured data; reproduced the related **GNN** model and tried to improve the model structure and **graph sampling method**; tried to improve the existing method by adopting the ideas of subgraph encoding pre-training and tree-graph transformation for the graph sampling problem.

Ongoing: ST-LoRA: Low-rank Adaptation for Spatio-Temporal Forecasting

Fall 2023 - Now

Hong Kong University of Science and Technology(GZ)

- **Research intern** in the **CityMind** group led by Prof. Yuxuan Liang at HKUST(GZ).
- **Individual performance:** research includes the fields of ITS, ST data prediction, time series prediction, and big language modeling; reproducing ST graphical models in traffic flow/urban scenarios, innovating a kind of accessory module based on the existing models and traffic flow datasets, and confirming that the performance of each model has been improved to a certain extent through experiments, and translating the result into a conference article. **Currently have a paper under review.**

Campus Experience

Class President

2020-now

The 20th Network Engineering Class Committee of Jinan University

- As a class representative, I not only have to prioritize notifications to class members while taking care of academics and competitions, but I also have to deal with matters such as general assessment/academic affairs/green card evaluation/scholarships/faculty meetings/activities, etc. I have also gained trusting relationships with my fellow students. This responsibility has also helped me to gain a trusting relationship with my classmates and to develop my communication and coordination skills.

Minister of Propaganda Department

2020-2022

Jinan University student dormitory building association

- I served as an officer and vice minister of the school organization for one year, which helped me to improve my coordination and scheduling of department members and communication skills with internal and external organizations, as well as learning a lot about photography, tweeting, design software such as PS/PR, and publicity of works.

Club Membership

2020-now

Jinan University Computer Geek Association

- Learning the technology of using Unity to create games, currently updating 2 projects; and has released **4** RPG indie games, accumulating certain project management and experience in using game development engine; in the world's largest comprehensive digital distribution platform Steam on behalf of the work "**Orphan of the Petal**", and has achieved most of the positive results.

Club Membership

2020-2023

The ACM Programming Team of Jinan University

- He spent a lot of time studying ACM programming from the ground up in college, from passing the varsity team selection to winning the ACM Programming Contest, taking care of his coursework while promoting his studies with the contest. He was awarded 1762 points (**max. 1961**) in **Codeforces**, the world's largest algorithmic communication platform. And I was also the first freshman to win a bronze medal in the history of the varsity team and an AK in the varsity competition.

Skills

Programming: 1) Possess excellent computer literacy, a solid foundation in mathematics and science, good coding style, programming thinking, and program debugging habits. 2) Strong understanding of algorithm design and data structures.

Technology Stack: Comparatively familiar with C/C++ and Python, understand Java and C# to do application development scenarios, master object-oriented programming techniques.

Data Science: 1) Can use Pytorch framework for deep learning as well as building AI models, and has been involved in many AI-related projects (e.g., time series forecasting and sentiment analysis). 2) Ability to use crawling techniques to acquire data, along with experience in data preprocessing and data analysis.

Writing ability: 1) Write some blogs about algorithm and has 2000+ followers in CSDN; 2) Maintain over 20 repositories on github.

Certificates: NCRE-2, NCRE-3, CET-4, CET-6, PAT