

# ZIYUE WU

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## EDUCATION

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### **Zhejiang University, Chu Kochen Honors College**

2017 – Now

*Double Major:* Statistics & Information Management and Information Systems

GPA: 3.96/4 (89.63/100)

Rank: 5/139

## RESEARCH INTERESTS

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The interdisciplinary field of Statistics and Business, Social Network Analysis, Graph Mining, Causal Inference, Bayes Statistics, Monte Carlo Methods, High-dimensional Statistics Analysis, Interpretable Machine Learning, the Application of Machine Learning in Business and so on.

## RESEARCH EXPERIENCES

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### **Research and Improvement of the Approximate Algorithm for Solving Partial Observable Markov Decision Process (POMDP)**

2019.5 – 2020.5

*Summer Research Training in UCLA* Advisor: Prof. Tao Gao. University of California, Los Angeles

- Built and refactored the training environment using Python and TensorFlow.
- Implemented the point-based value iterative algorithm (PBVI) for solving POMDP.
- Improved the belief point generation method in PBVI algorithm to accelerate the convergence and enhance the stability of the algorithm.

### **Analysis of Soccer Movement Model Based on Sensor Data**

2019.5 – 2020.5

*Undergraduate Research Training in Chu Kochen Honors College, Independent* Advisor: Prof. Xi Chen.

- Collected the movements data of the college soccer team with sensors.
- Partitioned the multi-dimensional time series data with stochastic sampling methods.
- Used CNN and Bi-LSTM model to capture the patterns and features of movements data.
- Classified different actions such as turning, running and passing the ball and achieved a classification accuracy higher than 92%.

### **Urban Tourism Traffic Optimization Based on Visitors' Track Data**

2018.8 – 2019.1

*Challenge Cup, Academic Competition* Advisor: Prof. Xi Chen & Prof. Shanshan Lin.

- Acted as the team leader and provided modeling and programming work to measure the tourists influence based on visitors' message data.
- Used Python for data cleaning and modeling. Wrote programs for automatic text processing to extract longitude, latitude and time information.
- Used the Latent Factor Model and constructed a scenic spots recommendation system. Designed special tourist line according to the prediction scores of scenic spots.
- Provided visualized reports for government about the temporal and spatial distribution of visitors using Seaborn and Echart.

### **Mathematical Contest in Modeling in Zhejiang University**

2019.5

*Awards: The Third Prize in Zhejiang University (Top10%).* Advisor: Prof. Zhiyi Tan

- Theme: A Combinatorial Optimization Scheme for Multi-objective Tracking Problem.
- My Role: Responsible for the design of target tracking combination optimization algorithm and the formulation of tracking strategy.

## National Mathematical Contest in Modeling for College Students

2019.9

Awards: *The Third Prize in Zhejiang Province (Top15%)*. Advisor: Prof. Zhiyi Tan

- Theme: Modeling of Concentric Drum Movement Problem.
- My Role: Responsible for simulating part (Code implementation with Matlab) and writing part of report paragraphs.

## ERP Business Simulation Competition

2020.5 – 2020.6

Used ERP software in the enterprise resource management competition. Acted as the team leader to coordinate procurement, production, sales and other affairs. Made pricing and marketing strategies according to the analysis of historical sales data. Led the team to get an excellent ranking in the competition(1/10).

## EXCHANGE EXPERIENCES

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### Oxford University, Lady Margaret Hall, UK

2018.7 – 2018.8

Went to Oxford University for a three-week study in the summer vacation of 2018 as a visiting student.

Awards: Best Presentation award for group academic project.

### National University of Singapore (NUS)

2020.7

Participated in the Data Science Online Exchange Program in NUS, studying machine learning and data-driven decision management.

## HONORS AND AWARDS

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### Scholarship

National Scholarship	2018
First-Class Scholarship for Excellent Students in Zhejiang University	2018 & 2019
Outstanding Students in Chu Kochen Honors College	2018 & 2019
Provincial Scholarship	2019 & 2020
Research Innovation Pacesetter in Chu Kochen Honors College	2019 & 2020

## EXTRACURRICULAR EXPERIENCES

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### President of Tsingyun Piano Club of Zhejiang University

2018.5 – 2019.5

Coordinated all departments within the club. Organized and carried out a number of large-scale campus activities such as The Christmas Concert to popularize piano music culture among teachers and students.

### Leader of the course group of ZJU Hongyuan Volunteer Teaching Group

2018.8 – 2018.9

Went to Hongyuan, Aba, Sichuan for a three-week volunteer teaching activity in 2018. Acted as the leader of the course group and organized more than 60 courses for Aba Chengguan Primary School.

### Member of Chu Kechen Honors College Swimming Team

2018.1 – Now

Acted as the main force of butterfly stroke, breaststroke and medley stroke in the team. Won 2 gold medals, 1 silver medal and 1 bronze medal for the team in total in various competitions.

### Member of Chu Kechen Honors College Soccer Team

2017.9 – 2019.1

Acted as the right winger of the team and participated in many soccer competitions, such as the Sanhao Cup in the university. The team has been in the final four in Sanhao Cup Competition.

## SKILLS AND INTERESTS

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- Programming: Python, R, SQL, C/C++, Matlab, NodeXL, stata, Data Visualization, Database.
- English: CET4-663, CET6-592, TOEFL-103.
- Interests: Photography, All kinds of Outdoor Activities, Traveling, Writing, Music Making, Guitar, Piano.
- Personal Website (Know More About Me): <https://www.ziyuewu.com>