HAOTIAN CHEN

Email: cht0709@pku.edu.cn   Homepage: https://haotianchen1999.github.io   Phone: (86) 188-1140-2450

EDUCATION

Peking University, School of Mathematical Sciences   Sept. 2017 - June 2021
Bachelor of Statistics

Coursework: *Mathematical Analysis, Advanced Algebra, Set Theory and Graph Theory, Functions of Real Variables, Mathematical Logic, Probability Theory, Mathematical Statistics, Applied Stochastic Process, Applied Regression Analysis, Applied Multivariate Statistical Analysis, etc.*

Activities: Peking University Youth Volunteers Association

Research Interests: Statistical Machine Learning; Reinforcement Learning; Conformal Prediction

PROJECTS

The decontamination efficiency of different laundry detergent solutions

Research Report of Applied Regression Analysis

- Used the logit model to test the missing mechanism of the data, confirmed that it is MAR (missing at random) by χ^2 test, and supplemented the missing value with the mean

- Constructed multiple regression model for the 21 physical properties of different product solutions and 18 decontamination efficiency properties, including multiple linear regression model, multiple nonlinear regression model with quadratic and interaction terms, etc., and used the F-statistic to test the model fitting effect

- Choosed the adjusted determination coefficient as the evaluation criterion for the model, tried to find the optimal subset of independent variables

The relationship between NBA star performance and team wins and losses

Research Report of Statistical Learning

- Processed and analyzed the data of different players, used multiple statistical learning methods and established classification models between player performance and team wins and losses, such as Logistic regression, linear discriminant analysis, decision trees, and support vector machines, etc.

- Used AIC criterion to attempt to improve the model and further draw conclusion

PROFESSIONAL EXPERIENCES

Guangzhou Zhixin High School   Guangzhou, China
Math competition coach for China National High School Mathematics League   Aug. 2021 - July 2022

- Tutored students to win the provincial first prize in the Mathematics League
- Participated in *the Guangzhou Top Innovative Talent Program*
- Completed the task of creating math questions for *the Guangzhou High School Mathematics Competition* independently and contributed original test questions

Math teacher   Aug. 2021 - June 2023

- Taught two Yuanpei classes in the senior year of high school (usually impossible for new teachers)
- Achieved the highest score among young teachers in the school teaching competition in this decade, enhanced students' understanding of knowledge through a scenario-based deduction method

SELECTED HONORS AND AWARDS

1st Prize of the Guangzhou Senior High School Mathematics Teacher Problem-Solving Competition (top 10 of the city's 2000 math teachers)   2023
Outstanding Achievement Award for the Guangzhou Strong Foundation Program   2022
3rd Prize of National College Student Physics Competition   2019
2rd Prize of Chinese Physics Olympiad   2016
3rd Prize of National High School Mathematics League   2016

LANGUAGE, SKILLS AND INTERESTS

Language	Chinese (native), English (fluent)
Programming	C, Python, R
Interests	Badminton, Swimming, Literature, Music, etc.