

# HAOTIAN CHEN

Email: cht0709@pku.edu.cn

Homepage: <https://haotianchen1999.github.io>

Phone: (86) 188-1140-2450

## EDUCATION

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**Peking University, School of Mathematical Sciences**

Sept. 2017 - July 2021

*B.S. in Statistics*

*Advisor: Prof. Xiangzhong Fang*

**Activities:** Peking University Youth Volunteers Association

**Programming:** Python, R, C

**Research Interests:** Statistical Machine Learning; Large Language Models; Conformal Prediction

## INTERNSHIP

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**University of Pennsylvania**

Aug. 2023 - present

*Research Intern (Remote)*

*Mentor: Prof. [Weijie Su](#)*

## PROJECTS

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**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

**An exploration of hierarchical speculative decoding**

*Research Project during Internship*

- Proposed a new hierarchical variant of speculative decoding for accelerating LLMs
- Discussed the theoretical performance of the algorithm and compared it with the original version, found improvements under certain configurations and analyzed possible reasons

## PROFESSIONAL EXPERIENCES

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**Guangzhou Zhixin High School**

Guangzhou, China

*Math competition coach*

Aug. 2021 - July 2022

- Tutored students to win the provincial first prize in *China National High School Mathematics League*
- Participated in the *Guangzhou Top Innovative Talent Program*

*Math teacher*

Aug. 2021 - July 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's teaching competition

## SELECTED HONORS AND AWARDS

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**1st Prize of Guangzhou 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

**2nd Prize of Chinese Physics Olympiad** 2016

**3rd Prize of National High School Mathematics League** 2016