

# Boyuan Zhang

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## Education

**New York University, College of Arts and Sciences**, New York, NY Jan. 2021 – Dec. 2023(exp.)

Bachelor of Arts, Computer and Data Science

- Minor in Mathematics and Business Studies
- Major GPA: 3.88 / 4; Cumulative GPA: 3.78 / 4
- *Honor: Dean's List (Academic year 2021-22)*

**The Experimental High School Attached to BNU**, Beijing, China Sep. 2017 – June 2020

- *Honor: Golden-Ship Award (Top 1%)*

**Syracuse University, Falk College of Sport and Human Dynamics**, Syracuse, NY July 2019

Berlin Sports Analytics Academy

## Academic Interest

Methodology: Causal, Bayesian, and Statistical Inference; Statistical Machine Learning;

Application: Healthcare, Public Policy, Social Science, and Sports.

## Research Experience

**Memorial Sloan Kettering Cancer Center, Dept. of Epidemiology and Biostatistics**, New York, NY

Quantitative Sciences Undergraduate Research Experience June 2023 – Aug. 2023

- Research Area: Causal Discovery and Bayesian Inference with Applications to Cancer
- Advisor: Dr. Wesley Tansey

**New York University, Courant Institute of Mathematical Science**, New York, NY

Machine Learning for Good (ML4G) Laboratory Feb. 2023 – Present

- Research Area: Causal Inference and Discovery Algorithms
- Advisor: Dr. Daniel Neill

**Carnegie Mellon University, Department of Statistics and Data Science**, Pittsburgh, PA

Summer Undergraduate Research Experience in Statistics June 2022 – July 2022

- Research Area: Data Science in Sports Analytics
- Advisors: Dr. Ronald Yurko, Dr. Konstantinos Pelechrinis

**Peking University, School of Electronics Engineering and Computer Science**, Beijing, China

Science Talent Program Mar. 2018 – Dec. 2018

- Research Areas: IoT, Embedded Systems, Computer Electronics, and Information Technology
- Advisor: Prof. Yanjun Yang

## Selected Projects

Calibrated NBA Win Probability Estimation

Spring 2023

Fingertips Position Estimation of a Robot Hand

Fall 2022

Lip Reading Word Classification	Fall 2022
Regularized Adjusted Expected Goal Plus-Minus Model for Soccer	Summer 2022
Personalized Intelligence Mailbox Based on IoT	2018

## Invited Talks

<b>Carnegie Mellon Sports Analytics Conference</b> , Pittsburgh, PA	Oct. 2022
A Regularized Adjusted Plus-Minus Model in Soccer with Box Score Prior	
<b>Carnegie Mellon Sports Analytics Camp</b> , Pittsburgh, PA	Aug. 2022
A RAPM Model for Soccer Player Ratings (with Edvin Tran Hoac and Phong Hoang)	
<b>Science Talent Program Computer Science Forum</b> , Sichuan, China	Nov. 2018
Personalized Intelligence Mailbox Based on IoT	

## Publication

### Work in Progress

- “Automated Discovery of Difference-in-Differences”
- “A Regularized Adjusted Expected Goal Plus-Minus Model for Soccer”

## Teaching Experience

<b>New York University</b> , New York, NY	Fall 2022 - Present
<b>Grader</b> , Center for Data Science	
• <i>DS-UA 201: Causal Inference</i> . Prof: Parijat Dube. Summer 2023	
<b>Tutor</b> , Department of Computer Science, Courant Institute of Mathematical Science	
• <i>CSCI-UA 2 - 004: Intro to Computer Programming</i> . Prof: Mihir Patil. Spring 2023	
• <i>CSCI-UA 2 - 006: Intro to Computer Programming</i> . Prof: David Prager. Fall 2022	
• <i>CSCI-UA 2 - 010: Intro to Computer Programming</i> . Prof: Khye Borg Liew. Fall 2022	
<b>The Experimental High School Attached to Beijing Normal University</b> , Beijing, China	
<b>Instructor</b> : Orienteering	Fall 2019, 2020 / Spring 2020

## Other Experience

<b>Learnjoy Sports</b> , Beijing, China	Sep. 2020 – Dec. 2020
<i>Events Management and Operation Intern</i>	

## Services

<i>Academic Tutor</i> , <b>NYU Teaches</b>	Oct. 2021 – Present
<i>Captain</i> , <b>ESBNU Orienteering Varsity</b>	Sep. 2017 – June 2020
<i>Director of Sports Department</i> , <b>ESBNU Student Council</b>	Nov. 2017 – Nov. 2019

## Awards

Honorable Distinction in the Computational and Algorithmic Thinking Competition	2019
Second Prize in Beijing Adolescents Science and Technology Innovation Contest	2019
Honorable Mention in High School Mathematical Contest in Modeling	2018
Second Prize in the National Olympiad of Informatics in Provinces	2018

## Skills

**Coding:** Python (TensorFlow, PyTorch), R, SQL, Java, C/C++, MATLAB, Git, Markdown, LaTeX

**Tools:** Tableau, MongoDB, Android Studio, Arduino, OCAD, Excel, PowerPoint, Word

## Relevant Coursework

- **Probability and Statistics:**  
Probability and Statistics 2 (Graduate), Intro to Stochastic Processes (Graduate), Causal Inference, Probability and Statistics, Regression and Forecasting Model
- **Statistical/Machine Learning and Deep Learning:**  
Theory of Deep Learning (PhD), Modern Topics in Statistical Learning Theory (Graduate), Advanced Techniques in Machine Learning and Deep Learning, Predictive Analytics, Intro to Machine Learning
- **Data Science:**  
Data Management and Analysis, Responsible Data Science, Intro to Data Science
- **Computer Science Foundations:**  
Basic Algorithms, Computer Systems Organization, Data Structures
- **Mathematical Foundations:**  
Real Analysis, Linear Algebra, Multivariable and Vector Calculus, Discrete Mathematics

## References

- **Dr. Parijat Dube**  
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New York University  
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- **Dr. Ronald Yurko**  
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Carnegie Mellon University  
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- **Dr. Halina Frydman**  
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- **Dr. Antoine Cerfon**  
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