JINGTONG SU

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EDUCATION

New York University (NYU) *Sep 2021 - Jun 2026 (expected)*

Ph.D. in Data Science, Center for Data Science.

Advisor: Professor Julia Kempe.

Peking University (PKU) *Sep 2017 - Jul 2021*

B.S. in Data Science and Big Data Technology, Yuanpei College.

Selected Courses : Deep Learning : Algorithm and Application (Graduate Level), Machine Learning (Graduate Level), Probability Theory, Mathematical Statistics, Information Theory, Convex Analysis and Optimization, High-Dimensional Probability, Methods of Mathematical Physics, Game Theory.

RESEARCH INTERESTS

Robust Machine Learning, Efficient Machine Learning, Applications of Machine Learning in Physical Sciences.

EXPERIENCE

Department of Electrical and Computer Engineering, Princeton University

Research Assistant, International Student Internship Program *Mar 2020 - Sep 2020*

Advisor: Professor Jason D. Lee.

- Studied network pruning. Experimentally revealed factors that decide the performance of a pruned subnetwork. Designed a new data-independent pruning algorithm without any training as a simple baseline and a by-product.

School of Electronics Engineering and Computer Science, Peking University

Undergraduate Research Student *Nov 2020 - Jun 2021*

Advisor: Professor Yisen Wang.

- Studied OOD generalization. Interpreted IRMv1 as a poorly solved Adversarial Training. Gave a proposition on the disability of AT on OOD generalization.
- Was awarded the Exellent Undergraduate Thesis at School of Electronics Engineering and Computer Science.

Center for Computational Astrophysics, Flatiron Institute

Ph.D. Researcher *Feb 2022 - present*

- Studied Turbulence Simulation. Introduced the Adversarial Noise Injection dynamic to assist rollout generalization of deep-learning based simulators.

PUBLICATIONS

- Shiji Xin, Yifei Wang, **Jingtong Su**, and Yisen Wang. *On the Connection between Invariant Learning and Adversarial Training for Out-of-Distribution Generalization.* AAAI 2023 (Oral).

- **Jingtong Su** and Julia Kempe. *Wavelets beat Monkeys at Adversarial Robustness.* NeurIPS Workshop on Machine Learning and the Physical Sciences, 2022.
- **Jingtong Su**, Julia Kempe, Drummond Fielding, Nikolaos Tsilivis, Miles Cranmer, and Shirley Ho. *Adversarial Noise Injection for Learned Turbulence Simulations.* NeurIPS Workshop on Machine Learning and the Physical Sciences, 2022.
- Nikolaos Tsilivis, **Jingtong Su**, and Julia Kempe. *Can We Achieve Robustness From Data Alone?* ICML Workshop on New Frontiers in Adversarial Machine Learning, 2022.
- **Jingtong Su**[*], Yihang Chen[*], Tianle Cai[*], Tianhao Wu, Ruiqi Gao, Liwei Wang and Jason D. Lee. *Sanity-Checking Pruning Methods: Random Tickets can Win the Jackpot.* NeurIPS 2020.

HONORS AND AWARDS

- **National Science Foundation Research Traineeship (NRT) Future Program** *2021*
- **Outstanding Graduate in Beijing, Top 5%** *2021*
- **Merit Student (Individual Annual Honor, Top 5%)** *2020, 2018*
- **Merit Student Pacesetter (The Highest Individual Annual Honor, Top 6)** *2019*
- **PKU 3rd-class Scholarship (Annual Scholarship, Top 5%)** *2020, 2019*
- **May 4th Scholarship (Annual Scholarship, Top 5%)** *2018*
- **Chinese Physics Olympiad, Gold Medal (Ranking: #74 / 100,000+ Participants)** *2016*

ACTIVITIES

Data Science and Big Data Technology Association@Yuanpei College
Vice-President/President *2018-2019/2019-2020*

- Led the reform of the undergraduate training program in data science, producing the clearest and most complete training program to date.
- Led the development of a grade level adaptation plan for Data Science to help introduce younger students to relevant experiences. Helped establish a mentor-mentee system for the data science discipline.

Academic Planning Department@Yuanpei College
Minister *2018-2019*

- Initiated the Interview Program for Research and the Excellent Graduate Interview Program, organized English test preparation experience sharing sessions for all students in PKU. Organized several online study groups for students to participate in.
- Within one year, about 40 interview drafts were published.

STANDARDIZED TEST GRADES

- TOEFL : 108 (S24)
- GRE : V157 (75%) + Q169 (94%) + AW4.5 (80%)