Jin Jiang

Email: jinjsworkmail@gmail.com

Github: https://hollowolloh.github.io

Education

- **University of Southern California** — Los Angeles, CA
  Masters of Arts in Mathematics — *Aug. 2021 - May. 2023*
- **Shandong Agricultural University** — Taian, China
  Bachelor of Mathematics and Applied Mathematics — *Aug. 2015 - May 2019*

Mathematics Courses*: Probability and Statistics, Discrete Mathematics, Analysis, Topology, Differential Geometry, Abstract Algebra*

Computer Science Courses*: Mathematics of Machine Learning, C++ Programming, Data Structure, Analysis of Algorithms*

Research Experience

- **Research on Structure of Fourier Transformation Basis on Finite Abelian Group**
  Undergraduate thesis research supervised by Professor Feng — *Aug. 2018 - Jul. 2019*
  - Explored the formation of the basis of Fourier Transform on finite Abelian group by comparing the similarity of the basis of Fourier transform on different domain.
  - Combined the structure theorem of finite-generated Abelian group and decomposed the finite Abelian group to express the direct product of finite circle groups.
  - Proved the structure and formation of Fourier basis on finite Abelian group by induction.
- **Summer Camp on Algorithm Analysis**
  Algorithm training and learning supervised by Professor Fei — *May. 2016 - Oct. 2017*
  - Learned cs-related algorithms covering topics including dynamic programming, graph algorithms, greedy methods, and data structures.
  - Realized math-related algorithms including euclid algorithm, gaussian elimination, fast fourier transformation, etc.
  - Analyzed time and space complexity of various algorithms to evaluate performance and optimize implementation.

Current Reading

- **Statistics Learning Theory**
  Self-learning to prepare for future research — *Jan. 2025 - Present*
  - Studied fundamental models such as regression, boosting, kernel methods, etc under statistical learning frameworks.
  - Enthusiastic to explore related field like statistics, machine learning and optimization theories.
- **Category Theory and its Applications**
  Self-interest for understanding the foundation of mathematics — *Oct. 2024 - Jan. 2025*
  - Studied core concepts including objects, morphisms, functors, natural transformations, and commutative diagrams.
  - Investigated categorical logic and its relevance to set theory, foundations, and mathematical abstraction.

Awards

- 2017 - Second prize in the national college students mathematical modeling contest
- 2016 - Bronze Medal in The ACM-ICPC Asia Regional Contest

Skills

- **Languages:** C & C++, Golong, Python, Shell Script, SQL
- **Tools:** Docker, Git, Postman, SSH, Latex
- **Hobbies:** Painting, Calligraphy, Ping Pong, Swimming