

Qixuan Wang

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EDUCATION

Duke Kunshan University

Kunshan, China

Bachelor of Science in Applied Mathematics and Computational Science

September 2020 – May 2024

- **Cumulative GPA:** 3.622/4.0 (Dean's List: 2020 Fall), **Major GPA:** 3.7
- **Relevant Coursework:** Introduction to Applied Statistical Method (R), Introduction to Data Science (Python), Introduction to Programming and Data Structure (Java), Linear Algebra, Probability and Statistics, Numerical Analysis, ODE and Dynamical Systems
- **Teaching Experience:** Tutored undergraduates in Math 205, Math 206, Math 308, STAT 101 for 80+ hours
- **Discrete Math Seminar:** Gave two talks at the seminar – one is [The Borel-Cantelli Lemma and the Growth Rate of Partial Maxima](#) and the other is [The Probabilistic Method: The Basic Method and the Local Lemma](#)

Duke University

Durham, USA

Exchange Program

January 2023 – May 2023

- **GPA:** 4.0/4.0 (Dean's List with Distinction: 2023 Spring)
- **Relevant Coursework:** Real Analysis, Statistical Learning and Inference

RESEARCH EXPERIENCE

Diffusion Probabilistic Models [\[Code\]](#)

Durham, USA

Supervised by Professor Jian-Guo Liu (Duke University)

May 2023 – Present

- Adopted the input perturbation method to the single image generation and proposed an improved version of the single image denoising diffusion model (SinDDM)
- Achieved better visual results compared to the original method, and intended to apply the algorithm to speech synthesis and text generation

The Sunflower Lemma

Kunshan, China

Supervised by Professor Italo Simonelli

June 2022 – December 2022

- Aimed to make an improvement of the existing lower bound for the Sunflower Lemma
- Pinpointed and corrected a mistake in a formula in the literature and got the correct lower bound in a special case

The Borel-Cantelli Lemma and the Growth Rate of Partial Maxima [\[Paper\]](#)

Kunshan, China

Supervised by Professor Italo Simonelli

October 2021 – June 2022

- Presented a new, simple proof of the law of iterated logarithm for minima of uniform random variables and proved new extensions of the Borel-Cantelli Lemma
- Published a preprint on SSRN – [An Elementary Proof of the Law of Iterated Logarithm for Minima and New Extensions of the Borel-Cantelli Lemma](#) (listed on SSRN's Top 10 download list for Probability & Statistics eJournal)

LEADERSHIP AND ACTIVITIES

- Vice President of DKU Soccer Association [\[News\]](#)
- Founder of United Platform sponsored by DKU Innovation Incubator [\[News\]](#)
- Playing for DKU Varsity Soccer Team from Fall 2020 to Fall 2022 [\[News\]](#)
- Startup project TalkTalkAI: got interviewed by the partners of two venture capital corporations – Y Combinator China and Panda Capital
- Open-source projects on AI and machine learning: Received **1.1k+** stars on GitHub; my [speech synthesis project](#) was one of the **Top 20** applications (sorted by trending) on Hugging Face
- Content creator on bilibili (one of the major Chinese over-the-top streaming platforms serving videos on demand): Made 25+ videos about the applications of AI and machine learning such as speech synthesis, voice conversion, and stable diffusion; **6k+** followers and **380k+** views

SKILLS

Languages: Chinese (Native); English (Fluent)

Technical Skills: Python, R, Java, LaTeX, and Mathematica