

Yichen Wu

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EDUCATION

Duke Kunshan University (DKU) & Duke University Dual Degree

Major

Class of 2028

Applied Math & Computational Science; Math Track (DKU)

Kunshan, China

- GPA: 3.749/4.000
- Courses: Math, Computer Science, Music
- 13+ years of formal training in music (piano and choral singing)

RESEARCH EXPERIENCE

Research Assistant — Multimodal Temporal Modeling with ECG and Chest X-rays

Durham, U.S

Supervisor: Professor [Yiran Chen](#)

May 2026 - present

- Conducted research in multimodal medical AI and longitudinal patient modeling using large-scale clinical ECG and chest X-ray datasets.
- Contributed to clinical data preprocessing, patient-level data alignment, temporal dataset construction, and model development to investigate relationships between physiological signals and medical imaging over time.
- Developed and evaluated deep learning approaches for integrating ECG and imaging data to represent patient health status and predict future clinical information.
- Performed model comparisons, ablation studies, and quantitative analyses to assess the effects of data selection, input modalities, and modeling strategies on performance.

Research Assistant — Mathematical Modeling of Music and Brainwaves

Kunshan, China

Supervisor: Professor [Huaxiong Huang](#)

January 2026 - present

- Conducted research on the relationship between musical stimuli and brainwave patterns using mathematical modeling and signal analysis.
- Analyzed time-series brainwave data (e.g., frequency-domain and time–frequency representations) to study music-induced neural responses.
- Applied mathematical and computational methods to model and interpret signal structures arising from music perception.

Theoretical Research Project — Mathematical Modeling of Nonlinear String Vibrations

Kunshan, China

Supervisor: Professor [Paul Stanley](#)

September 2025 - present

- Investigating the mathematical and physical principles underlying sound production in traditional and modern musical instruments, focusing on string vibrations, resonance, and wave dynamics.
- Planned extension: Applying Fourier analysis and basic digital filtering techniques to extract spectral properties from instrument recordings, as a bridge to audio signal analysis.

2025 National Anti-Bird Collision Action Alliance

Kunshan, China

Supervisor: Professor [Binbin Li](#)

February 2025 - October 2025

- Drafted and co-authored the 2025 Annual Report, synthesizing research findings and project outcomes on bird-collision prevention
- Recruited and coordinated volunteers to support field research and outreach initiatives.
- Conducted quantitative data analysis and developed visual charts to illustrate key trends.
- Leveraged tools like Xiumi and Canva to publish WeChat articles, driving 20000+ total views by 10+ articles in two months, thereby boosting the domestic visibility of the anti-bird collision project.

TEACHING EXPERIENCE

Introduction of Calculus

Kunshan, China

Instructor: Professor [Pascal Grange](#)

October 2025 - December 2025

Linear Algebra

Kunshan, China

Instructor: Professor [Pengzhan Guo](#)

August 2025 - October 2025

- Facilitated weekly recitation sessions to reinforce fundamental concepts.
- Assisted students with homework and exam preparation through interactive problem-solving.
- Provided individualized tutoring to address specific learning difficulties.
- Collaborated with the professor to revise and enhance tutorial sheets for improved clarity and instructional effectiveness.

INTERNSHIP

Implementation Engineer Intern

Shanghai, China

Shanghai Tongban Information Service Co., Ltd

May 2025 - August 2025

- Assisted in deploying and configuring enterprise information systems, ensuring smooth integration with client business processes.
- Supported technical troubleshooting and provided on-site assistance to optimize system performance.
- Conducted requirement analysis and documented workflows to align implementation with client needs.
- Collaborated with senior engineers to test, debug, and refine software modules of real-world application.

LEADERSHIP & SERVICE

CS Club

Kunshan, China

Director of Communications & Operation Team

September 2025 - present

- Designed and managed digital content for the club's communications channels, including WeChat articles and event promotions.
- Coordinated publicity strategies to increase student engagement and event participation.
- Collaborated with team members to produce data-driven reports on outreach effectiveness.
- Supported the planning and execution of lectures, workshops, and public engagement activities like HackDKU.

Chorus

Kunshan, China

Alto

September 2025 - present

- Perform as an Alto in the university chorus, rehearsing and performing polyphonic and traditional choral repertoire.
- Collaborate with peers from diverse backgrounds in weekly rehearsals, developing strong ensemble and musical interpretation skills.
- Participated in campus concerts and community outreach performances, contributing to cultural and artistic life on campus.

Volleyball Club

Kunshan, China

Vice President

December 2025 - present

Secretary

May 2025 - December 2025

- Record attendance by taking a group photo after each training session as a way of signing in, provide positive reinforcement and encouragement to members who actively participate in club activities, and send reminders to less active members to encourage their participation in future club activities, in order to foster a greater sense of involvement and enthusiasm within the club.
- Organize events such as intramural competitions to motivate students to join campus-wide volleyball tournaments to foster a love for volleyball and campus day to showcase the club's culture and activities to attract prospective students and introduce them to DKU's sports club community.

ADDITIONAL INFORMATION

Languages: English (Fluent), Japanese (Conversational), Mandarin (Native), Korean (Conversational)

Skills: Programming (Python, Julia, LaTeX, Mathematica), Design & Content Creation (Canva, Xiumi, Photoshop), Office Tools (Microsoft Office Suite), Social Media Management (WeChat Official Account, Weibo), Research (Survey Design, Academic Poster Presentation, Data Analysis), Piano (Professional), Guitar (Amateur)