

Beilong Tang

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EDUCATION

North Carolina State University (NCSU)
Ph.D. in Electrical Engineering

Aug. 2025 – May. 2030
North Carolina, USA

Duke Kunshan University (DKU) & Duke University Dual Degree

Aug. 2021 – May. 2025

B.S. in Computer Science (DKU)

Kunshan, China

B.S. in Interdisciplinary Studies; Applied Math & Computational Sciences; Computer Science (Duke) Durham, U.S.

- GPA: 3.886/4.0
- Graduated with **Signature Work with Distinction** and **Magna Cum Laude (top 15% GPA)** award
- Notable Courses:
 - COMPSCI 309 Elements of Machine Learning – A
 - COMPSCI 402 Artificial Intelligence – A
 - STATS 403 Introduction to Deep Learning – A+
 - MATH 302 Numerical Analysis – A+
 - MATH 305 Advanced Topics in Linear Algebra – A+
 - (Graduate Course at Duke) COMPSCI 572 Natural Language Processing – A
 - (Graduate Course at Duke) ECE 689 Advanced Topics in Deep Learning – A+

RESEARCH EXPERIENCE

Research Assistant for Generative Models

Aug. 2025 – Present

The *VISSTA* Lab, NCSU

Supervisor: Dr. Hamid Krim

- Accelerate diffusion models' sampling process.

Research Assistant for Speech Separation and Enhancement

May. 2024 – June. 2025

The *SMIP* Lab, DKU

Supervisor: Dr. Ming Li

- Conduct target speaker extraction using discrete tokens and auto-regressive language models.
- Explore discretization methods for mixed speech.
- Enhance speaker privacy protection.

Research Assistant for Federated Learning Project

May. 2023 – Jan. 2024

The *Edge Intelligence Lab*, DKU

Supervisor: Dr. Bing Luo

- Deployed Federated Learning (FL) and Federated Analytics (FA) on Edge Devices.
- Built privacy-preserving health monitoring system using FL and FA on DKU campus.
- Full-stack development for Android and iOS devices.

PUBLICATIONS

Tang, B., Zeng, B., & Li, M. (2025). LauraTSE: Target Speaker Extraction using Auto-Regressive Decoder-Only Language Models. *IEEE Automatic Speech Recognition and Understanding Workshop (ASRU)*.

Tang, B., Miao, X., Wang, X., & Li, M. (2025). SEF-MK: Speaker-Embedding-Free Voice Anonymization through Multi-k-means Quantization. *IEEE Automatic Speech Recognition and Understanding Workshop (ASRU)*.

Lin, Y., Cheng, M., Li, Z., **Tang, B.**, & Li, M. (2025). Diarization-Aware Multi-Speaker Automatic Speech Recognition via Large Language Models. *arXiv preprint arXiv:2506.05796*.

Tang, B., Zeng, B., & Li, M. (2024). TSELM: Target Speaker Extraction using Discrete Tokens and Language Models. *arXiv preprint arXiv:2409.07841*.

Geng, J., **Tang, B.**, Zhang, B., Shao, J., & Luo, B. (2024). Demo: FedCampus: A real-world privacy-preserving mobile application for smart campus via federated learning & analytics. In *Proceedings of the 25th International Symposium on Theory, Algorithmic Foundations, and Protocol Design for Mobile Networks and Mobile Computing (MobiHoc '24)*. ACM.

He, S., **Tang, B.**, Zhang, B., Shao, J., Ouyang, X., Nugraha, D. N., & Luo, B. (2024). Fedkit: Enabling cross-platform federated learning for Android and iOS. In *IEEE INFOCOM 2024 - IEEE Conference on Computer Communications Workshops (INFOCOM WKSHPS)* (pp. 1–2). <https://doi.org/10.1109/INFOCOMWKSHPS61880.2024.10620662>

TEACHING EXPERIENCES

Teaching Assistant for COMPSCI 201: Intro to Programming and Data Structures	May. 2022 – May. 2023
<i>The Computer Science Center, DKU</i>	Instructor: Dr. Jiang Long
<ul style="list-style-type: none">Developed <u>quiz website</u> using Django framework in Python – no bugs were reported in usage.Cooperated with other teaching assistants to come up with new quizzes and teaching plans for the course.Covered course material and homework in recitation and lab sections to improve students' grades.	

AWARDS

<ul style="list-style-type: none">DKU Undergraduate Graduation with Distinction –2025DKU Signature Work with Distinction – 2025DKU Magna Cum Laude (top 15% GPA) awardDean's List (top 30% academic performance per term) and Dean's List with Distinction (top 10%)<ul style="list-style-type: none">Dean's List: Fall 2021, Fall 2022Dean's List with Distinction: Spring 2022, Spring 2023, Fall 2024, Spring 2025100% Tuition Scholarship for Undergraduate Program: UGRD Entrance Scholarship, JF Progressive ScholarshipSummer Research Scholarship (SRS) 2023 & 2024Silver Medal, International Genetically Engineered Machine (iGEM) 2023 DKU TeamNanjing Marathon Top 15% (4567/30000)Yantai's Golden Sands Half-Marathon Top 5% (157/3764)Champion, One-Kilometer Run, DKU Physical Fitness Test	
	Nov. 2023
	Oct. 2023
	June. 2023
	Oct. 2022

SIDE PROJECTS

Research Assistant for Search Engine Research Project	Oct. 2022 – May. 2023
<i>The Search So Team, DKU</i>	Instructor: Dr. Jiang Long
<ul style="list-style-type: none">Developed benchmarks to evaluate the performance of our self-developed search engine.Created <u>DKU-Wiki</u> in Vue and Django to demonstrate the search engine's functionality.	

Leadership & Developer for Student Entrepreneurship Project	Oct. 2022 – Jan. 2023
<i>The Roomie Student Entrepreneurship Team, DKU</i>	
<ul style="list-style-type: none">Developed an app enabling college students to find roommates based on MBTI personality types.Collaborated closely with leadership team members to drive project vision and execution.Recruited team members with a passion for programming and relevant technical skills.	

Open-Source Developer for <u>Repolab-Quiz</u>	May. 2022 – July. 2022
<i>DKU</i>	Instructor: Dr. Jiang Long
<ul style="list-style-type: none">Independently developed a dynamic quiz website using Django that supports fill-in-the-blank questions, multiple-choice questions, and Java programming questions.Supported easy quiz generation using formatted Json files.Used as teaching material for COMPSCI 201.	

SERVICES & LEADERSHIP

<ul style="list-style-type: none">President for DKU Running Club	May. 2024 – Present
<ul style="list-style-type: none">Lead daily practices.Collaborate with other leaderships to build comfortable and inclusive running atmosphere.Compete in cross-countries, half marathons and marathons.	
<ul style="list-style-type: none">Vice President for DKU Basketball Club & DKU Basketball Varsity Team Member	May. 2021 – Jan. 2024
<ul style="list-style-type: none">Organized and coordinated basketball events, ensuring smooth execution and participation.Managed financial planning and budgeting for club events and activities.Competed in games representing DKU.	
<ul style="list-style-type: none">Volunteer for Duke China US-Summit	Aug. 2023
<ul style="list-style-type: none">Drummer for band <i>Sky Steed</i>	Sept. 2021 – May. 2023
<ul style="list-style-type: none">Volunteer for Health Education Program for high school students	Aug. 2021 – Aug. 2022
<ul style="list-style-type: none">Designed educational posters on vaccines and bacteria to promote health awareness.Delivered engaging presentations to high school students during lunch breaks, fostering understanding of public health topics.	

SKILLS & HOBBIES

- **Languages**
 - English (fluent) with TOEFL score of 107, Mandarin (native)
- **Programming Languages**
 - Python, Java, JavaScript, SML-NJ
- **Frameworks and Tools**
 - PyTorch, Django, Vue, MySQL
- **Hobbies**
 - Running, Hiking, Basketball, Free Boxing, Drummer