Beilong Tang

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EDUCATION

North Carolina State University (NCSU)   Aug. 2025 – May. 2030
Ph.D. in Electrical Engineering   North Carolina, USA
- GPA: 4.0/4.0

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

RESEARCH EXPERIENCE

Research Assistant for Generative Models   Aug. 2025 – Present
The *VISSTA* Lab, NCSU   Supervisor: Dr. Hamid Krim
- Modeling diffusion process as a sequence of images on a high-dimensional manifold.

Research Assistant for Speech Separation and Enhancement   May. 2024 – June. 2025
The SMIIP 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
The Computer Science Center, DKU   Instructor: Dr. Jiang Long
- Developed quiz website 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

- DKU Undergraduate Graduation with Distinction –2025
- DKU Signature Work with Distinction – 2025
- DKU Magna Cum Laude (top 15% GPA) award
- Dean's List (top 30% academic performance per term) and Dean's List with Distinction (top 10%)
  - Dean's List: Fall 2021, Fall 2022
  - Dean's List with Distinction: Spring 2022, Spring 2023, Fall 2024, Spring 2025
- 100% Tuition Scholarship for Undergraduate Program: UGRD Entrance Scholarship, JF Progressive Scholarship
- Summer Research Scholarship (SRS) 2023 & 2024
- Silver Medal, International Genetically Engineered Machine (iGEM) 2023 DKU Team   Nov. 2023
  - Developed team wiki page independently.
  - Created a markdown editing website for easy collaboration.
- Nanjing Marathon Top 15% (4567/30000)   Oct. 2023
- Yantai's Golden Sands Half-Marathon Top 5% (157/3764)   June. 2023
- Champion, One-Kilometer Run, DKU Physical Fitness Test   Oct. 2022

SIDE PROJECTS

Research Assistant for Search Engine Research Project   Oct. 2022 – May. 2023
The Search So Team, DKU   Instructor: Dr. Jiang Long
- Developed benchmarks to evaluate the performance of our self-developed search engine.
- Created DKU-Wiki in Vue and Django to demonstrate the search engine's functionality.

Leadership & Developer for Student Entrepreneurship Project   Oct. 2022 – Jan. 2023
The Roomie Student Entrepreneurship Team, DKU
- 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 Repolab-Quiz   May. 2022 – July. 2022
DKU   Instructor: Dr. Jiang Long
- 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

- President for DKU Running Club   May. 2024 – Aug. 2025
  - Lead daily practices.
  - Collaborate with other leaderships to build comfortable and inclusive running atmosphere.
  - Compete in cross-countries, half marathons and marathons.
- Vice President for DKU Basketball Club & DKU Basketball Varsity Team Member   May. 2021 – Jan. 2024
  - 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.
- Volunteer for Duke China US-Summit   Aug. 2023
- Drummer for band *Sky Steed*   Sept. 2021 – May. 2023
- Volunteer for Health Education Program for high school students   Aug. 2021 – Aug. 2022
  - 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