

# Miao He

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## EDUCATION

- **Beijing Institute of Technology** Beijing, China  
*Major in Computer Technology* Sep 2021 - Present
- **Wuhan University of Technology** Wuhan, China  
*Bachelor of Software Engineering; Graduation thesis is **Research on Singing Speech Synthesis Technology**;* Sep 2017 - July 2021  
*GPA: 3.96 (Top 3%); National Inspirational Scholarship 3 times*

## RESEARCH EXPERIENCE

- **Visit at The Chinese University of Hong Kong, Shenzhen** Shenzhen, China  
*Emotional text-to-speech* Oct 2023 - Present
  - Under the guidance of Professor Li Haizhou, I am conducting research on emotional speech synthesis using large speech models. This involves creating emotional conversational speech datasets and ultimately serving conversational text-to-speech systems.
- **Research on Streaming Any-to-Any Voice Conversion** Beijing, China  
*Streaming voice conversion* Dec 2022 - Aug 2023
  - To address the research gap in streaming speech conversion in arbitrary scenarios, I introduce a novel model called RTTL-VC. This innovative approach helps transfer comprehensive content knowledge from text-to-speech to voice conversion. Extensive experiments demonstrate that RTTL-VC excels in terms of both latency and conversion quality, rendering it highly suitable for real-time applications.
- **Project on Key Technologies for Artificial Intelligence Development Framework for Key Industry Fields** Beijing, China  
*Speech direction model migration* Apr 2023 - Present
  - Based on the PaddlePaddle platform, I am responsible for method implementation and model migration on speech direction, involving vocoder, speech synthesis, speech recognition, voice conversion, etc.
- **Develop Technology search Engine HammerScholar** Beijing, China  
*Front-end development and maintenance* Sep 2021 - Present
  - HammerScholar academic search engine is implemented based on the Vue framework. I am mainly responsible for front-end development and subsequent daily system maintenance. Access url: <https://hammerscholar.net/>.
- **Project on Joint Extraction Technology of Entities and Relationships for the Financial Field** Shanghai, China  
*Model training and system development* Dec 2022 - Apr 2023
  - In collaboration with the Industrial and Commercial Bank of China, I actively contributed to a project focused on joint extraction of financial text internship relationships at the chapter level. My primary responsibilities included assisting senior colleagues in model training and actively participating in the development of the project acceptance system.
- **National College Student Innovation and Entrepreneurship Training Program** Wuhan, China  
*System Development* Oct 2018 - Apr 2020
  - The research topic is *Building a Multi-dimensional Course knowledge Graph Framework Based on Deep Learning*. Specifically, I am responsible for the application development, and assist other members to construct the knowledge graph.

## RESEARCH ACHIEVEMENT

- **Papers**
  - Real Time Transfer Learning for Any-to-Any Voice Conversion (Neural Networks journal under submission).
  - Automatic textual Knowledge Extraction based on Paragraph Constitutive Relations (ICSAI2019, Paper url).
- **Computer software copyrights:** 5 software copyrights for *Introduction to Computer System* and 1 for *HammerScholar Intelligent Search Engine*.

## CAMPUS ACTIVITY AND AWARD EXPERIENCE

- **The second prize** in the Central and South Division of the 2019 Computer Design Competition.
- **The third prize** in Wuhan University of Technology ACM Programming Contest.
- **The second prize** of Wuhan University of Technology Science and Technology Data Transmission Application Ability Design Competition.
- *The 2019 ICDM/ICBK Knowledge Graph Contest **Honor Award** (Top 5).*
- Sep 2021 - Present, Student Job: **Student in Charge of Organization.**

## SKILLS LIST

- **Languages:** Python, HTML, CSS, JavaScript, C, Java
- **Technologies:** Pytorch, Kaldi, PaddleSpeech, Vue, Reat, Ant Design Pro, Django, Laravel, Axure
- **Models:** FastSpeech2, Diffusion