QINGYU LIU

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EDUCATION

Shanghai Normal University, Shanghai, China   2020.10 - 2024.06

B.S. in Electronic Information Engineering

- **GPA**: **3.95**/4.00, **Top 2**
- **TOEFL iBT**: **104**
- **Honors**: Second-Class Scholarship, Outstanding Graduate

RESEARCH EXPERIENCES

Emotional Text to Speech   2024.08 - Present

- **Contributions**: Investigated current emotional TTS research, explored the integration of TTS and LLMs to enhance LLMs' understanding of contextual semantics for more precise emotion control over generated speech ; explored leveraging large unlabeled speech datasets to enhance the naturalness of generated speech.

ICSD: An Open-source Dataset for Infant Cry and Snoring Detection   2023.11 - 2024.07

- **Contributions**: Constructed and open-sourced the **Infant Cry and Snoring Detection (ICSD) dataset** on **GitHub** for public research use. The ICSD dataset comprises three subsets: synthetic data created with Scaper, weakly labeled clips with event-level annotations, and strongly labeled actual data annotated manually. Proposed the **Competitive CRNN+BEATs** method, significantly improving system performance on the ICSD dataset.
- **Outcomes**: **One paper** has been submitted to (ESWA) Expert Systems with Applications。

A Comparative Study of Deep learning Methods for Infant Cry Detection   2023.02 - 2023.10

- **Contributions**: Proposed two novel methods to improve baseline systems, including an ensemble learning method and a sspectrogram-based preprocessing method applied in the CRNN and ASTs. These methods significantly enhanced system performance, achieving a 5.06% accuracy improvement on a noisy background test set compared to baseline models.
- **Outcomes**: **One paper** has been published in NCMMSC2023, poster presentation.

PAPER LIST

- **Qingyu Liu**, Li Li, Yifan Zhou, Dongxing Xu, Yanhua Long*. "A Comparative Study of Deep Learning Methods for Infant Cry Detection." in NCMMSC. 2023.
- **Qingyu Liu**, Longfei Song, Dongxing Xu, Yanhua Long*. "ICSD: An Open-source Dataset for Infant Cry and Snoring Detection." arXiv preprint.

AWARDS

14th Challenge Cup, **Silver Award**	2024.07
China International College Students'Innovation Competition (2024), **Silver Award**	2024.06
9th "Think Youth" Digital Creation, Innovation & Entrepreneurship Competition, **First Prize**	2024.06
National Undergrad Training Program for Innovation and Entrepreneurship, **Project Leader**	2024.03

INTERNSHIP

Shanghai Jiao Tong University X-Lance Lab ｜ **Research Assistant**	2024.08 - Present
Unisound AI Technology Co., Ltd. ｜ **Research Intern**	2023.11 - 2024.05