# Zhihao Qian

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#### EDUCATION

#### Xidian University

Sept. 2022 - Expected Jul. 2026

BEng in Computer Science and Technology, Big Data and Intelligence Track

Xi'an, China

• GPA: 4.0/4.0

• Rank: 2/1500+ (first year), 1/476 (second year), 1/105 (third year)

#### Academic Research

# LES-Talker: Fine-Grained Emotion Editing in Linear Emotion Space

Apr. 2024 - May 2025

First Author (Under Review at ICCV 2025)

- Led the full research pipeline, from problem formulation to model design, experimentation, and paper writing.
- Proposed the Linear Emotion Space (LES), a novel interpretable framework enabling fine-grained emotion editing across types, intensities, and facial units.
- Designed LES-Talker with a universal Cross-Dimension Attention Network to align 3D model deformation with emotional control signals, achieving high-quality and controllable talking head generation.

### KAN-Face: Efficient Resource Usage and Precision Lip-Sync

Mar. 2024 - Nov. 2024

Co-author (Accepted at ICASSP 2025)

- Contributed to the design and refinement of a lightweight framework utilizing KANs for efficient and accurate talking head generation.
- Participated in the development and review of the Lip-Sync Enhancement Module, which integrates audio-temporal features and 3D representations to improve sync precision.
- Actively involved in technical discussions and rebuttal preparation, focusing on highlighting contributions and addressing reviewer feedback.

#### EmoSpeaker: Emotion-Controlled Talking Face Generation

Nov. 2023 - Feb. 2025

Co-author (Under Review at IEEE TMM)

- Assisted in a one-shot framework capable of fine-grained emotional control and precise lip synchronization.
- Contributed to the design of an audio decoupling mechanism guided by facial attributes.
- Actively involved in paper revision and rebuttal writing, focusing on technical clarity, reviewer responses, and refinement of contributions.

#### PROJECTS EXPERIENCE

# Public Transportation Management System - Android App Development Oct. 2024 - Dec. 2024

- Led a team in developing a full-stack Android application for public transportation management, utilizing tools such as MySQL, Python, C++, and Qt Creator.
- Designed a low-redundancy relational database tailored to project needs, and implemented a user-friendly visual interface with strong human-computer interaction capabilities.
- Proposed a technical framework for lightweight management systems with similar structures, enabling easy expansion and portability across different use cases.

#### AWARDS

#### Multi-modal Learning for Audio-driven Talking Head Generation

Jan. 2024

Champion — Task 3 in AAAI2024 Workshop on AI for Digital Human, BDIV Lab

- Achieved top scores across four evaluation metrics in both video- and audio-based tracks.
- Modified SadTalker by removing PoseNet and redesigning ExpNet for direct 70D 3DMM prediction, enabling strategic trade-offs that improved key directional metrics.
- Enhanced realism via innovative blinking and lip-sync strategies using OpenFace and Hubert, improving non-English alignment and eye movement synthesis.

## Additional Information

Developer Tools: Python, Pytorch, C, Assembly Language, MySQL, C++, Java

Languages: English (TOEFL), Chinese (native tongue)