

ZELIN FU

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🎓 EDUCATION

Northeastern University (NEU)

2022 – 2026 (Expected)

B.S in Computer Science (CS) | GPA: 89.65/100 (ranked 8/118)

☁ RESEARCH INTERESTS

Multi-modal LLMs; Generative Models; Embodied AI

📄 PUBLICATIONS

**Note: In all publications listed, Changzeng Fu served as faculty advisor.*

1. Changzeng Fu, **Zelin Fu**, et al. (2025). The First MPDD Challenge: Multimodal Personality-aware Depression Detection. *ACM Multimedia* (CCF-A, Accepted). [[link](#)]
2. Changzeng Fu, **Zelin Fu**, et al. (2024). In-Context Multitask Learning for Few-shot Fine-tuning of Large Language Models in Traditional Chinese Medicine Tongue Diagnosis. *ICASSP* (CCF-B). [[link](#)]
3. Changzeng Fu, Qi Zhang, **Zelin Fu**, et al. (2025). A Privacy-Constrained Speech Emotion Recognition Framework using Transformers and Fibonacci Position Embedding. *ESWA* (JCR-Q1, Under Review).

♡ HONORS AND AWARDS

— Scholarship Awards

- **National Scholarship** **1st Place in major**
- **Outstanding Student** **Top 1.5%**
- **Second-class Scholarship** **Top 4.5%**
- **Innovation and Entrepreneurship Scholarship** **Top 10%**

— Competition Awards

- **19th National SmartCarRace for College Students** **National 1st Prize**
- **5th Global Campus Artificial Intelligence Algorithm Elite Competition** **National 2nd Prize**
- **2024 Mathematical Contest In Modeling** **National 2nd Prize**
- **22nd National RoboMaster Super Combat** **National 3rd Prize**
- **17th Chinese Collegiate Computing Competition** **National 3rd Prize**

🐱 INTERNSHIP

HACI Lab, NEU

Mar. 2024 – Present

Advisor: Dr. Changzeng Fu

Research Assistant – Multimodal Affective Computing | MLLMs | HCI

Beijing CodNoy Co., Ltd.

Sep. 2023 – Dec. 2023

Front-end Development Intern – Java | Database Management

ABB Xiamen Smart Technology Co., Ltd

Jul. 2023 – Aug. 2023

Embedded Development Intern – Firmware Programming | Embedded Systems

🚀 RESEARCH EXPERIENCE

Multimodal Personality-aware Depression Detection

Oct. 2024 – July 2025

HACI Lab (NEU) | OU | CAM | IC | WU | XMU – Core Contributor

- Extracted and processed multimodal features from audio and video data.
- Used **LLMs** to generate personality trait embeddings for personalized depression prediction.
- Developed the baseline code and implemented **multimodal models** for depression classification [[Code](#)].
- Conducted experiments and reported benchmark results, wrote the baseline paper.
- A Grand Challenge proposal and baseline paper are accepted to *ACM Multimedia 2025* [[Challenge-Website](#)]

LLM-based TCM Tongue Diagnosis

Mar. 2024 – Oct. 2024

HACI Lab (NEU) – Group Leader

- Constructed two datasets from TCM clinic and website with tongue feature labels for **few-shot fine-tuning**.
- Proposed an in-context multitask fine-tuning framework for **LLMs**, applied **LoRA** for few-shot fine-tuning.
- Achieved **58.02%** accuracy in eight-type constitution classification, results published at **ICASSP 2025**.

Video Understanding Enhancement with VLM

Jan. 2024 – Feb. 2024

NLP Lab (NEU) | NTU | UTS – Group Leader

- Reproduced **Vision-Language Models** to validate performance on benchmark Video-QA datasets.
- Integrated **Chain-of-Thought** reasoning methods into temporal question answering to enhance multi-step video understanding.

A Privacy-Constrained SER Framework

Dec. 2024 – Feb. 2025

HACI Lab (NEU) | OU – Core Contributor

- Collected and analyzed baseline methods for privacy-aware speech emotion recognition to support model comparison and experiment design.
- Participated in manuscript writing and revision.
- A paper has been submitted to *Expert Systems with Applications*.

PROJECT EXPERIENCE

Intelligent Rescue System

Apr. 2024 – Aug. 2024

19th SmartCarRace for College Students – Core Contributor | National 1st Prize

- Integrated **YOLOv5** with **ROS** for object detection and navigation by calibrating camera–LiDAR and computing target distance and heading angles[[🔗Code](#)].
- Built a **U-Net** based lane-following algorithm with lighting robustness.

TCM diagnosis system

Mar. 2024 – Oct. 2024

HACI Lab (NEU) – Group Leader

- Developed a non-contact **pulse detection system** using an external webcam, extracted wrist regions from video frames for heart rate calculation [[🔗Code](#)].
- Extracted facial landmarks using **OpenCV** and **dlib** for facial color and puffiness detection.
- Built a vector database and integrated **LLMs** with **RAG** for multi-source diagnostic interpretation.
- An invention **patent** has been accepted, led a provincial-level innovation project as the first author.

Road Disease Detection

Dec. 2023 – Jan. 2024





Global Campus AI Algorithm Competition – Core Contributor | National 2nd Prize

- Trained and ensembled **object detection models** with bounding box fusion for road damage detection.
- Collected and semi-supervised annotated data using web crawlers [[🔗Code](#)].

SKILLS

- **Programming Languages:** Python, C, C++, Java, Matlab, Bash, SQL, HTML
- **Frameworks:** PyTorch, Tensorflow, DeepSpeed, OpenCV, ROS
- **Tools:** Git, LaTeX, Docker

MISCELLANEOUS

-  Blog ·  GitHub ·  Zhihu ·  Personal Website
- English Level: CET-4: 600, CET-6: 507; TOEFL: 95
- Interests: Percussion (World 3rd Prize), Piano (Level 10), Badminton (Varsity member), Basketball (MVP, CS Department Tournament)