

ANNA MIN

+86 15071436728 ◇ man20@mails.tsinghua.edu.cn ◇ [Personal Website: annamin0.github.io](https://annamin0.github.io)

EDUCATION

Bachelor of Engineering in Software Engineering, Tsinghua University Sep 2020 - June 2024 (Expected)

Major GPA: 3.73 /4.00

sophomore: 3.78, junior: 3.86

Relevant Courses: Probability and Statistics, AI, ML, Complex Analysis, Data Structure, Advanced Algebra, Formal Verification, Discrete Mathematics, Computer Networks, Operating Systems, Databases, Compilers, Computer Organization, Digital Electronics, Web Development, Formal Languages and Automata, Computer Graphics

PUBLICATIONS

-
- [1] **Anna Min**, Ziyang Chen, Hang Zhao, Andrew Owens. Crafting Precision in the Wild: Learning Spatial Sound Localization from Unlabelled Egocentric Videos (*in submission*) [\[Paper\]](#)
 - [2] **Anna Min**, Chenxu Hu, Yi Ren, Xiang Yin, Hang Zhao. When End-to-End is Overkill: Rethinking Cascaded Speech-to-Text Translation (*in submission to COLING2024, under review*) [\[Paper\]](#)
 - [3] **Anna Min**, Chenxu Hu, Yi Ren, Hang Zhao. Fine-grained Emotion Transfer for Speech-to-Speech Translation in Expressive Video Dubbing (*AAAI24 workshop on AI for Digital Human Oral Presentation, in submission to NAACL2024, under review*) [\[Paper\]](#)

RESEARCH EXPERIENCE

Crafting Precision in the Wild: Learning Spatial Sound Localization from Unlabelled Egocentric Videos

Visiting Research Intern

July- 2023

Advisor: Prof. Andrew Owens, University of Michigan

- Explore weak labels based on the direction of source motion for accurate binaural sound localization prediction
- Introduce the first stereo dataset and benchmark for sound localization in the wild which is gathered from an extensive corpus of 8,000 hours of YouTube binaural sound videos
- Design a pipeline for Sim2Real from synthetic data and models to in-the-wild data
- Summary of findings available [\[Paper\]](#)

When End-to-End is Overkill: Rethinking Cascaded Speech-to-Text Translation

Research Intern

Mar - 2023

Advisor: Prof. Hang Zhao, Tsinghua University

- Explore the advantages of integrating multiple ASR candidates and self-supervised speech features into MT
- Propose a method that leverages two different pre-trained auto-regressive models to enhance a cascaded system, addressing the challenges associated with error divergence
- Summary of findings available [\[Paper\]](#)

Fine-grained Emotion Transfer for Speech-to-Speech Translation in Expressive Video Dubbing

Research Intern

Nov 2022 - 2023

Advisor: Prof. Hang Zhao, Tsinghua University

- Construct the first training set with aligned bilingual audio tracks with the same emotion from movies
- Use waveform to tokenized unit translation and HiFi-GAN-based networks for transferring pitches and rhythms
- Outperform the baseline by a significant 20% improvement in emotional expression
- Summary of findings available [\[Paper\]](#)

SELECTED PROJECTS

Mini Database [Code]	Feb - May 2023
<ul style="list-style-type: none">• Wrote a database that supports basic SQL queries with optimization, transactions, locks, and recovery	
Android Chat App [Code]	Feb - May 2023
<ul style="list-style-type: none">• Wrote an Android app and Django server which support user searching, following, and chatting	
FTP Server & Client [Code]	Sep 2022 - Jan 2023
<ul style="list-style-type: none">• Wrote an FTP server in C and FTP client UI in Python supporting most basic commands	
Compiler from C++ to LLVM [Code]	Sep 2022 - Jan 2023
<ul style="list-style-type: none">• Convert C++ to LLVM intermediate representation based on Python-Lex-Yacc and LLVM Lite compilers• Support comprehensive error handling, preprocessing, multidimensional array operations, and scope mechanisms	
Mars Online Judge Platform [Code] [Website] [Media Coverage]	Sep 2022 - Jan 2023
A web-based project for MarsOJ organization's students to provide online supplementary training	
<ul style="list-style-type: none">• The platform offers real-time answer battle and review of wrong answers as the main features to consolidate and improve offline educational content, teachers can also track students' learning progress through the platform• Tech lead, responsible for the back-end, participate in the front-end• This platform has over 3000 users and 1000 subscribers, and has both a web version and a mini-program version	
Machine Learning Modeling Services [Code]	Jul 2022 - Aug 2022
One-stop solution based on providing model deployment online	
<ul style="list-style-type: none">• Adapt to onnx, pmml, keras multiple machine learning models, out of the box, load balancing, complete testing• Mainly responsible for the back-end, participate in the front-end, familiar with django, docker, Kubernetes, celery, vue, javascript and other technology stacks	

HONORS AND COMPETITIONS

Tsinghua Academic Excellence Award	2023
<ul style="list-style-type: none">• <i>Awarded to 2 undergraduates out of 102 with academic achievements</i>	
Tsinghua Science and Technology Innovation Award	2023
<ul style="list-style-type: none">• <i>Awarded to 2 undergraduates out of 102 with academic achievements</i>	
Tsinghua Spark Scientific Innovation Fellowship	2022
<ul style="list-style-type: none">• <i>50/3900 Tsinghua undergraduates for outstanding research performance</i>	
Tsinghua Science and Technology Innovation Award	2022
<ul style="list-style-type: none">• <i>Awarded to 2 undergraduates out of 102 with academic achievements</i>	
The first prize of 2021 National Student Mathematical Modeling Competition	2021
<ul style="list-style-type: none">• <i>Ranked 89th out of 3,000 groups in Beijing Group</i>	

SKILLS

Programming: Python, C, C++, MATLAB, Rust, Java, Javascript, LaTeX, Verilog, SQL, Docker
Framework & Tools : Pytorch, Fairseq, Detectron, MMDetection, COLMAP, Qt
Languages : Chinese (Native), English (TOEFL 106 (R30+L27+W26+S23))