

# Xiangming Gu, Ph.D. Candidate

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🌐 <https://guxm2021.github.io>  
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## Education

- 2021.8 – now    📖 **Ph.D. Candidate, National University of Singapore** in School of Computing and Integrative Sciences and Engineering Programme.  
Supervisor: A.P. Ye Wang, GPA: 4.80/5.0.
- 2017.8 – 2021.6    📖 **B.E. & B.S. Degree, Tsinghua University** in Electronic Engineering and Finance.  
Supervisor: A.P. Jiansheng Chen, GPA: 3.80/4.0.
- 2020.1 – 2020.6    📖 **Exchange, National Univeristy of Singapore** in Electrical and Computer Engineering.  
Supervisor: A.P. Cheng Xiang, GPA: 4.88/5.0

## Employment

- 2023.3 – now    📖 **Research Intern, Sea AI lab** Research on Generative Modeling.  
Mentor: Dr. Tianyu Pang and Dr. Chao Du.

## Research Publications

### Conference Proceedings

- 1 **Gu, X.,** Ou, L., Ong, D., & Wang, Y. (2022). MM-ALT: A Multimodal Automatic Lyric Transcription System. In *ACM International Conference on Multimedia (MM)*, Lisbon, Portugal. (**Oral, Top Paper Award**).
- 2 Huang, H., **Gu, X.,** Wang, H., Xiao, C., Liu, H., & Wang, Y. (2022). Extrapolative Continuous-time Bayesian Neural Network For Fast Training-free Test-time Adaptation. In *Advances in Neural Information Processing systems (NeurIPS)*, New Orleans, United States.
- 3 Ou, L., **Gu, X.,** & Wang, Y. (2022). Transfer Learning of Wav2vec 2.0 for Automatic Lyric Transcription. In *International Society for Music Information Retrieval Conference (ISMIR)*, Bengaluru, India.

### Journal Articles




- 1 Wei, W., Huang, H., **Gu, X.,** Wang, H., & Wang, Y. (2022). Unsupervised Mismatch Localization in Cross-Modal Sequential Data with Application to Mispronunciations Localization. *Transactions on Machine Learning Research (TMLR)*.
- 2 Xue, Y., Chen, J., **Gu, X.,** Ma, H., & Ma, H. (2022). Boosting Monocular 3D Human Pose Estimation with Part Aware Attention. *IEEE Transactions on Image Processing (TIP)*, 31, 4278–4291.
- 3 Zhang, B., Yang, P., **Gu, X.,** & Liao, H. (2021). Laser Endoscopic Manipulator Using Spring-Reinforced Multi-DoF Soft Actuator. *IEEE Robotics and Automation Letters (RA-L)*, 6(4), 7736–7743.

### Technical Report

- 1 **Gu, X.,** Zeng, W., Zhang, J., Ou, L., & Wang, Y. (2023). *Deep Audio-Visual Singing Voice Transcription based on Self-Supervised Learning Models*.



- 2 **Gu, X., & Xiang, C. (2020).** *Distilling a deep neural network into a Takagi-Sugeno-Kang fuzzy inference system.*

## Skills

- Languages     Strong reading, writing and speaking competencies for English, Mandarin Chinese.
- Coding        Python, Matlab, Shell, C/C++, HTML, Verilog, Assembly language,  $\text{\LaTeX}$ , ...
- Libraries     PyTorch, Tensorflow, ...

## Miscellaneous Experience




### Academic Reviewers

- Conferences     ICCV 2023, AISTATS 2021.
- Journals        RA-L.

### Awards and Scholarships

- 2022     **Research Achievement Award**, National University of Singapore.
-  **MM'22 Top Paper Award**, Association for Computing Machinery.
-  **MM'22 Student Travel Grant**, Association for Computing Machinery.
- 2021     **President's Graduate Fellowship**, National University of Singapore.
- 2020     **Visiting Undergraduate Student Scholarship**, Tsinghua University.
- 2018     **Zheng Geru Scholarship**, Tsinghua University.

### Teaching Assistants

- 2023 Spring     **CS5242**. Neural Networks and Deep Learning.
- 2022 Fall        **CS3244**. Machine Learning.
- 2022 Spring     **CS4243**. Computer Vision and Pattern Recognition.