HONGKUN HAO

✉ haohongkun@sjtu.edu.cn · ☎ (+86) 15964326173

EDUCATION

Shanghai Jiao Tong University (SJTU), Shanghai, China   2022.9 – Present
Master student in Computer Science, expected March 2025
GPA: 3.92/4.00
Advised by Professor Rui Wang

Shanghai Jiao Tong University (SJTU), Shanghai, China   2018.9 – 2022.6
Bachelor of Engineering in Computer Science
Overall: 91.7/100

RESEARCH INTERESTS

- **Natural Language Processing**: Neural Machine Translation, Large Language Models.
- **Multi-Modality**: Text-To-Speech Synthesis, Multi-modal Large Language Models.

PAPERS

- **Rethinking Translation Memory Augmented Neural Machine Translation**   [Paper] [Code]
  Hongkun Hao, Guoping Huang, Lemao Liu, Zhirui Zhang, Shuming Shi, Rui Wang.
  In *Findings of the 61st Annual Meeting of the Association for Computational Linguistics.* **ACL 2023.**

- **Penalty Decoding: Well Suppress the Self-Reinforcement Effect in Open-Ended Text Generation**
  [Paper] [Code]
  Wenhong Zhu, **Hongkun Hao**, Rui Wang.
  In *Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing.* **EMNLP 2023.**

- **CLEAN-EVAL: Clean Evaluation on Contaminated Large Language Models**   [Paper]
  Wenhong Zhu, **Hongkun Hao**, Zhiwei He, Yunze Song, Yumeng Zhang, Hanxu Hu, Yiran Wei, Rui Wang, Hongyuan Lu.
  In *Findings of the 2024 Annual Conference of the North American Chapter of the Association for Computational Linguistics.* **NAACL 2024.**

- **Q-Refine: A Perceptual Quality Refiner for AI-Generated Image**   [Paper]
  Chunyi Li, Haoning Wu, Zicheng Zhang, **Hongkun Hao**, Kaiwei Zhang, Lei Bai, Xiaohong Liu, Xiongkuo Min, Weisi Lin, Guangtao Zhai.
  In *the 2024 IEEE International Conference on Multimedia and Expo.* **ICME 2024.**

PREPRINTS

- **Boosting Large Language Model for Speech Synthesis: An Empirical Study**   [Paper]
  Hongkun Hao, Long Zhou, Shujie Liu, Jinyu Li, Shujie Hu, Rui Wang, Furu Wei.

- **Can Watermarks Survive Translation? On the Cross-lingual Consistency of Text Watermark for Large Language Models**   [Paper]
  Zhiwei He, Binglin Zhou, **Hongkun Hao**, Aiwei Liu, Xing Wang, Zhaopeng Tu, Zhuosheng Zhang, Rui Wang.

- **Is Cognition and Action Consistent or Not: Investigating Large Language Model's Personality**   [Paper]

Yiming Ai, Zhiwei He, Ziyin Zhang, Wenhong Zhu, **Hongkun Hao**, Kai Yu, Lingjun Chen, Rui Wang.

- **Improving Open-Ended Text Generation via Adaptive Decoding**   [Paper]
  Wenhong Zhu, **Hongkun Hao**, Zhiwei He, Yiming Ai, Rui Wang.

Experience

ByteDance. Shanghai, China   2024.1 – Present
E-Commerce Group

The application of video understanding large language models in e-commerce business.
- Investigate the development of existing video understanding large language models.
- Use a small amount of e-commerce data to fine-tune video understanding large language models so that it can understand the e-commerce intent of TikTok videos.
- Identify the intention of e-commerce and then combine it with recommendation algorithms.

Microsoft Research Asia. Beijing, China   2023.4 – 2023.11
Research Intern   Mentored by Long Zhou and Shujie Liu

Boosting Large Language Model with Speech Synthesis Ability
- Conducted a comprehensive empirical exploration of boosting large language models with the ability to generate speech.
- Proposed to combine pre-trained large language model LLaMA and text-to-speech synthesis model VALL-E so that augmented LLMs can be used to synthesize speech.
- The proposed method outperformed the VALL-E baseline model on word error rate, speaker similarity, and speech naturalness.

Tencent AI Lab. Shenzhen, China   2021.12 – 2023.1
Research Intern   Mentored by Lemao Liu

Rethinking Translation Memory Augmented Neural Machine Translation
- Analysed the variance of translation memory augmented NMT models from the probabilistic view of retrieval and the bias-variance decomposition perspective.
- Proposed a simple yet effective lightweight network to ensemble translation memory augmented NMT models, which better trades off variance and bias.
- The proposed method outperformed both vanilla Transformer and baseline translation memory augmented NMT models under the low-resource scenario, plug-and-play scenario, and conventional high-resource scenario.

Seivices

- Reviewer of ACL Rolling Review (2024), ICME(2024), EMNLP(2023), NLPCC(2022, 2023), CCL(2022, 2023)
- Teaching assistant of CS3307: Internet-based Information Extraction Technologies (2022)

Skills

- Programming Languages: Python, C/C++
- Packages: PyTorch, fairseq, Transformers, NumPy

Selected Awards

Optiver Excellent Student Scholarship	2023
Best Bachelor Thesis Award	2022
Shanghai Jiao Tong University Outstanding Graduates	2022
Academic Excellence Scholarship	2019, 2020, 2021
The first prize of Mathematics Competition of Chinese College Student	2019