

Jinyi Hu

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EDUCATION BACKGROUND

Tsinghua University

PhD. Computer Science and Technology

Beijing, China

Sept.2021 - Jun.2026(expected)

Tsinghua University

Major: B.Eng. Computer Science and Technology

Beijing, China

Sept.2017 - Jun.2021

GPA: 3.76/4.0, Top 20%

Tsinghua University

Minor: Statistics

Beijing, China

Sept.2019 - Jun.2021

RESEARCH EXPERIENCE

Tsinghua NLP Lab

Lab Project Advised by Maosong Sun and Zhiyuan Liu

Beijing, China

Project: Large-Scale Multimodal Model

Apr.2023 - Present

- Develop a series of large multimodal models **VisCPM** support multimodal conversational capabilities (VisCPM-Chat) and text-to-image generation (VisCPM-Paint) in both Chinese and English, achieving SOTA performance among Chinese open-source multimodal models.

Tsinghua NLP Lab

Lab Project Advised by Maosong Sun

Beijing, China

Project: Text Generation with Transformer-based VAE

Sept.2021 - June.2022

- Develop a novel layer-wise recurrent latent variable structure for Transformer-based VAE
- Propose a Transformer-based recurrent VAE structure to enhance the diversity of text generation

Alibaba Damo Academy

Research Internship Advised by Boxing Chen

Hangzhou, China

Project: End-to-end speech translation

June.2020 - Oct.2020

- Design a new **pretrain** paradigm for **end-to-end speech translation**, which utilized a large amount of resources from both machine translation data and automatic speech recognition data

Mila-Quebec AI Institute

Research Internship Advised by Jian Tang

Montreal, Canada

Project: Interpretable Language Understanding

Jan.2020 - June.2020

- Develop a semi-supervised model that simultaneously classifies sentences and generates natural language explanations for the labels based on Expectation-Maximization (EM) algorithm

Tsinghua NLP Lab

Student Research Assistant Advised by Prof. Maosong Sun

Beijing, China

Project: Automatic Generation of Chinese Classical Poems

Jul.2019 - June.2020

- Design a uniform framework based on GPT-2 to generate major types of Chinese Classical Poems.
- Responsible for **Jiuge** system.

PUBLICATIONS

- **Jinyi Hu**, Yuan Yao, Chongyi Wang, Shan Wang, Yinxu Pan, Qianyu Chen, Tianyu Yu, Hanghao Wu, Yue Zhao, Haoye Zhang, Xu Han, Yankai Lin, Jiao Xue, Dahai Li, Zhiyuan Liu, Maosong Sun.

- Large Multilingual Models Pivot Zero-Shot Multimodal Learning across Languages. Preprint 2023.
- **Jinyi Hu**, Xu Han, Xiaoyuan Yi, Yutong Chen, Wenhao Li, Zhiyuan Liu, Maosong Sun. Efficient Cross-Lingual Transfer for Chinese Stable Diffusion with Images as Pivots. Preprint 2023.
 - Tianyu Yu*, **Jinyi Hu***, Yuan Yao, Haoye Zhang, Yue Zhao, Chongyi Wang, Shan Wang, Yinxu Pan, Jiao Xue, Dahai Li, Zhiyuan Liu, Haotao Zheng, Maosong Sun. Reformulating Vision-Language Foundation Models and Datasets Towards Universal Multimodal Assistants. Preprint 2023.
 - **Jinyi Hu**, Xiaoyuan Yi, Wenhao Li, Maosong Sun, Xing Xie. Fuse It More Deeply! A Variational Transformer with Layer-Wise Latent Variable Inference for Text Generation. **NAACL 2022**.
 - Wangchunshu Zhou*, **Jinyi Hu***, Hanlin Zhang, Xiaodan Liang, Maosong Sun, Chenyan Xiong, Jian Tang. Towards Interpretable Natural Language Understanding with Explanations as Latent Variables. **NeurIPS 2020**. (* indicates equal contribution)
 - **Jinyi Hu**, Xiaoyuan Yi, Wenhao Li, Maosong Sun, Xing Xie. Recurrence Boosts Diversity! Revisiting Recurrent Latent Variable in Transformer-Based Variational AutoEncoder for Diverse Text Generation. **Findings of EMNLP 2022**.
 - **Jinyi Hu**, Maosong Sun. Generating Major Types of Chinese Classical Poetry in a Uniformed Framework. LREC 2020.
 - Huimin Chen, Yankai Lin, Fanchao Qi, Peng Li, **Jinyi Hu**, Jie Zhou and Maosong Sun. Aspect-level Sentiment-Controllable Review Generation. AACL 2021.

SERVICES

- Reviewer: EMNLP 2023, ACL 2023, ACL 2022, EMNLP 2022, ACL 2021, ENNLP 2021

AWARDS & ACHIEVEMENTS

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|---|------------------|
| • Comprehensive Scholarship | <i>Oct.2022</i> |
| • Merit Student in Beijing | <i>Dec.2020</i> |
| • Tang Lixin Scholarship (Top 5%) | <i>Dec.2020</i> |
| • Academic Outstanding Scholarship | <i>Oct.2019</i> |
| • First Prize of the Physics Competition for College Students | <i>Dec.2018</i> |
| • Comprehensive Scholarship——Evergrande Scholarship (Top 5%) | <i>Oct.2018</i> |
| • Freshman Scholarship | <i>Sept.2017</i> |

SKILLS

- Extensive knowledge of Linux, Python, C++, Java, Git, and R, and could use Python packages including Pytorch, numpy, Stanza, transformers
- Language: GRE: Verbal:159, Quant: 168, AW: 3.5; College English Test-4: 606;