

Sijie Cheng

+ (86)-152-1600-0764 | ✉ csj23@mails.tsinghua.edu.cn |  Google Scholar

No.1, Section 4, Chengfu Road, Haidian District, Beijing 100-084, P.R.China

LONG-TERM VISION

As a second-year Ph.D. candidate, Sijie Cheng is passionate about pioneering **egocentric foundation models for Embodied AI**, aiming to create systems that see, think, and act like humans from a first-person perspective. Driven by her dedication to innovation, she aspires to advance the fields of **wearable devices** and **robotics**, pushing the boundaries of technology to create impactful products.

EDUCATION

- **Tsinghua University** Sept. 2023 - Present
Ph.D. in Computer Science and Technology
Beijing, China
 - Advisor: Prof. **Yang Liu**, Laboratory: **Natural Language Processing Lab & Institute for AI Industry Research**.
 - **Youth Talents Support Project for Doctoral Students**, China Association for Science and Technology.
- **Fudan University** Sept. 2020 - Jun. 2023
M.Sc. in Software Engineering
Shanghai, China
 - Advisor: Prof. **Yanhua Xiao**, Laboratory: **Knowledge Works Research Laboratory**.
 - **Outstanding Master's Thesis Award of the Shanghai Computer Society**: Analyzing and Exploiting Tacit Knowledge inside Pre-trained Language Models.
 - **National Scholarship, Outstanding Graduate Student in Shanghai**.
- **Chongqing University of Posts and Telecommunications** Sept. 2016 - Jun. 2020
B.Sc. in Software Engineering
Chongqing, China
 - Member of **Excellent Engineer Class**, GPA: 3.75/4.00 (1/75).
 - **Best Bachelor Thesis Award in School**.

LONG-TERM MISSION I: NEXT-GENERATION AI HARDWARE TARGETING AGI

- **Foundation Model Department** ◦ **RAYNEO (Smart Glasses)**  Dec. 2024 - Present
Department Head (Intern)
Shenzhen, China
 - Manager: **Hongwei Li (CEO)**
 - Responsible for Artificial Intelligence business and research in the smart glasses scenario.
- **Robotics X** ◦ **Tencent**  Jun. 2024 - Dec. 2024
Research Intern
Shenzhen, China
 - Mentors: **Lei Han**, Peers: **Tingguang Li, Ye Tian**
 - Developing egocentric benchmark and foundation models for Embodied AI.
- **Pre-training Group** ◦ **01.AI Company**  Aug. 2023 - Mar. 2024
Research Intern
Beijing, China
 - Mentors: **Xiangang Li**, Peers: **Wenhao Huang, Xiang Yue**
 - Enhancing the performance of open-source LLMs (7B) comparable to GPT-4.
- **Investment Department** ◦ **Sinovation Ventures**  Feb. 2023 - Dec. 2023
Investment Intern
Beijing, China
 - Mentor: **Bobing Ren**
 - Presenting survey of Generative AI and analyzing the technique of the corresponding projects.
- **Selected Paper - Foundation Models for Embodied AI**
[*: Equal Contribution, ¶: My Mentored Students]
 - [1]. **VidEgoThink: Assessing Egocentric Video Understanding Capabilities for Embodied AI**.
Sijie Cheng, Kechen Fang^{*}¶, Yangyang Yu^{*}¶, Sicheng Zhou^{*}¶, Bohao Li, Ye Tian, Tingguang Li, Lei Han, Yang Liu.
Pre-print 2024. **Huggingface Daily Paper Top-1**.
 - [2]. **EgoThink: Evaluating First-Person Perspective Thinking Capability of Vision-Language Models**.
Sijie Cheng^{*}, Zhicheng Guo^{*}¶, Jingwen Wu^{*}¶, Kechen Fang^{*}¶, Peng Li, Huaping Liu, Yang Liu.
In CVPR 2024, **Highlights (2.8%)**.
 - [3]. **OpenChat: Advancing Open-source Language Models with Mixed-quality Data**.
Sijie Cheng^{*}, Guan Wang^{*}¶, Xianyuan Zhan, Xiangang Li, Sen Song, Yang Liu.
In ICLR 2024, **5k+ GitHub Stars and 100k+ Huggingface Downloads**.
 - [4]. **ConvLLaVA: Hierarchical Backbones as Visual Encoder for Large Multimodal Models**.
Chunjiang Ge, Sijie Cheng, Ziming Wang, Jiale Yuan, Yuan Gao, Jun Song, Shiji Song, Gao Huang, Bo Zheng.
Pre-print 2024. **Huggingface Daily Paper Top-1**.

[5]. **Instruction-Guided Visual Masking.**

Jinliang Zheng*, Jianxiong Li*, **Sijie Cheng**, Yinan Zheng, Jiaming Li, Jihao Liu, Yu Liu, Jingjing Liu, Xianyu Zhan. In *NeurIPS 2024, ICML 2024 MFM-EAI Workshop* **Outstanding Paper**.

[6]. **DecisionNCE: Embodied Multimodal Representations via Implicit Preference Learning.**

Jianxiong Li*, Jinliang Zheng*, Yinan Zheng, Liyuan Mao, Xiao Hu, **Sijie Cheng**, Haoyi Niu, Jihao Liu, Yu Liu, Jingjing Liu, Ya-Qin Zhang, Xianyu Zhan. In *ICML 2024, ICML 2024 MFM-EAI Workshop* **Outstanding Paper**.

• **Selected Paper - Tool Learning**

[*: Equal Contribution, ¶: My Mentored Students]

[7]. **StableToolBench-MirrorAPI: Modeling Tool Environments as Mirrors of 7,000+ Real-World APIs.**

Zhicheng Guo¶, **Sijie Cheng**, Yuchen Niu, Hao Wang, Sicheng Zhou¶, Wenbing Huang, Yang Liu. **Under Review**.

[8]. **StableToolBench: Towards Stable Large-Scale Benchmarking on Tool Learning of Large Language Models.**

Zhicheng Guo¶, **Sijie Cheng**, Hao Wang, Shihao Liang, Yujia Qin, Peng Li, Zhiyuan Liu, Maosong Sun, Yang Liu. In *ACL 2024*, **100+ GitHub Stars**.

LONG-TERM MISSION II: LARGE LANGUAGE MODELS AS IMPLICIT KNOWLEDGE BASE

• **Natural Language Processing Group** ◦ **Shanghai AI Lab** [🌐]

Research Intern

Mar. 2022 - Dec. 2022

Shanghai, China

◦ Mentors: Prof. **Lingpeng Kong**, Peer: **Zhiyong Wu**

◦ Elicited Pre-trained Language Models to generate free-text explanations.

• **Natural Language Understanding Group** ◦ **Meituan** [🌐]

Research Intern

Nov. 2020 - Jun. 2021

Shanghai, China

◦ Mentor: **Rui Xie**

◦ Extracted user behavior data via BERT for taxonomy expansion.

• **Institute for AI Industry Research** ◦ **Tsinghua University**

Visiting Student

Jun. 2021 - Aug. 2023

Beijing, China

◦ Advisor: Prof. **Yang Liu** and **Yang (Veronica) Liu**

◦ Large Foundation Models as Continual Knowledge Bases

• **Natural Language Processing Lab** ◦ **Westlake University**

Visiting Student

Sept. 2019 - Sept. 2020

Hangzhou, China

◦ Advisor: Prof. **Yue Zhang**

◦ Conducted analysis of commonsense knowledge in Pre-trained Language Models.

• **Selected Paper - Applications**

[*: Equal Contribution, ¶: My Mentored Students]

[1]. **DEEM: Dynamic Experienced Expert Modeling for Stance Detection.**

Xiaolong Wang*¶, Yile Wang*, **Sijie Cheng**, Peng Li, Yang Liu.

In *LREC-COLING 2024*, **Oral**.

[2]. **Leveraging Language-based Representations for Better Solving Symbol-related Problems with Large Language Models.**

Yile Wang, **Sijie Cheng**, Zixin Sun¶, Peng Li, Yang Liu.

In *COLING 2025, ICLR-Workshop 2024*.

[3]. **Unsupervised Explanation Generation via Correct Instantiations.**

Sijie Cheng, Zhiyong Wu, Jiangjie Chen, Zhixing Li, Yang Liu, Lingpeng Kong.

In *AAAI 2023*, **Oral**.

[4]. **Prompt-Guided Retrieval Augmentation for Non-Knowledge-Intensive Tasks.**

Zhicheng Guo¶, **Sijie Cheng**, Yile Wang, Peng Li, Yang Liu.

In *ACL 2023*, **One Patent**.

[5]. **Learning What You Need from What You Did: Product Taxonomy Expansion with User Behavior Supervision.**

Sijie Cheng, Zhouhong Gu, Bang Liu, Rui Xie, Wei Wu, Yanghua Xiao.

In *ICDE 2022*, **One Patent**.

[6]. **Unsupervised Editing for Counterfactual Stories.**

Jiangjie Chen, Chun Gan, **Sijie Cheng**, Yanghua Xiao, Hao Zhou, Lei Li.

In *AAAI 2022*, **Oral**.

[7]. **FedGEMS: Federated Learning of Larger Server Models via Selective Knowledge Fusion.**

Sijie Cheng, Jingwen Wu¶, Yanghua Xiao, Yang Liu, Yang Liu.

In *Google Workshop 2021*, **One Patent**.

• Selected Paper - Analysis

[*: Equal Contribution, ¶: My Mentored Students]

[8]. [Say What You Mean! Large Language Models Speak Too Positively about Negative Commonsense Knowledge.](#)

Jiangjie Chen, Wei Shi, Ziquan Fu, **Sijie Cheng**, Lei Li, Yanghua Xiao.

In *ACL 2023*.

[9]. [Can Pre-trained Language Models Interpret Similes as Smart as Human?](#)

Sijie Cheng*, Qianyu He*[¶], Zhixu Li, Rui Xie, Yanghua Xiao.

In *ACL 2022*.

[10]. [On Commonsense Cues in BERT for Solving Commonsense Tasks.](#)

Leyang Cui, **Sijie Cheng**, Yu Wu, Yue Zhang.

In *ACL 2021*.

• Selected Paper - Others

[*: Equal Contribution, ¶: My Mentored Students]

[11]. [Modeling Adversarial Attack on Pre-trained Language Models as Sequential Decision Making.](#)

Sijie Cheng*, Xuanjie Fang*[¶], Yang Liu, Wei Wang.

In *ACL 2023*.

[12]. [Evolving Connectivity for Recurrent Spiking Neural Networks.](#)

Guan Wang[¶], Yuhao Sun, **Sijie Cheng**, Sen Song.

In *NeurIPS 2023*.

[13]. [Offline Reinforcement Learning with Long-Tailed Datasets.](#)

Li Jiang, **Sijie Cheng**, Jieli Qiu, Haoran Xu, Victor Wai Kin Chan, Ding Zhao.

In *ICML-Workshop 2023*.

SELECTED HONORS & AWARDS

- **Youth Talents Support Project, Ph.D. Program - China Computer Federation**, China Association for Science and Technology, 2025
- **Annual Best Paper Award**, Machine Translation Group@Tsinghua University, 2025
- **1st Place**, Tencent Basketball Association, 2024
- **President Award**, Institute for AI Industry Research@Tsinghua University, 2024
- **Financial Assistance**, Widening Natural Language Processing@EMNLP, 2024
- **Outstanding Paper**, Multi-modal Foundation Model meets Embodied AI@ICML, 2024
- **Outstanding Master's Thesis Award**, Shanghai Computer Society, 2024
- **Financial Assistance**, The Twelfth International Conference on Learning Representations (ICLR), 2024
- **Outstanding Graduate Student**, Shanghai, 2023
- **National Scholarship**, China, 2021-2022
- **Academic Scholarship**, Fudan University, 2020-2022
- **1st Place**, Women's Basketball Graduate School Cup in Fudan University, 2020
- **Best Bachelor Thesis Award**, Chongqing University of Posts and Telecommunications, 2020
- **User Experience Award**, Google Girl Hackathon, 2018
- **Best Technology Award**, Google Innocamp, 2017
- **Academic Scholar**, Chongqing University of Posts and Telecommunications, 2016-2018
- **1st Prize**, National Olympiad in Informatics in Provinces, 2006-2016

INVITED TALKS

- **EgoThink: Evaluating First-Person Perspective Thinking Capability of Vision-Language Models**, ZhiDX, Online, Sep. 2024
- **Core Competitiveness of Scientific Research in the Era of Large Models**, The Fourth Chinese Conference on Affective Computing, Nanchang, Jul. 2024
- **EgoThink: Evaluating First-Person Perspective Thinking Capability of Vision-Language Models**, AITIME, Online, Apr. 2024
- **Advancing Open-source Language Models with Mixed-Quality Data**, Next Capital, Online, Mar. 2024
- **Small- and Medium-Scale Foundation Models are Everywhere**, Chinese Academy of Sciences, Beijing, China, Mar. 2024
- **OpenChat: Advancing Open-source Language Models with Mixed-Quality Data**, Max-likelihood Community, Online, Nov. 2023
- **How to adapt to the pace of research in the era of LLMs**, MLNLP Community, Online, Nov. 2023
- **Research trends in the era of Foundation models**, Beijing Alumni Association of Fudan University, Beijing, China, Nov. 2023
- **Foundation, Construction, and Application of Knowledge Graph**, Tsinghua University, Beijing, China, Jul. 2021
- **Follow Your Heart: My Experience in Computer Science**, Microsoft Research Asia, Beijing, China, Mar. 2019