

GUANZHENG CHEN

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G Google Scholar GitHub

EDUCATION

National University of Singapore
PhD Student (First Year), School of Computing
Supervisor: Dr. Michael Qizhe Shieh

Singapore
Aug 2024 - ?

Sun Yat-sen University
Master Student (Third Year), Computer Science and Engineering
Supervisor: Dr. Shangsong Liang

Guangzhou, China
Sep 2021 - Jun 2024

Chongqing University
Bachelor Degree, Computer Science

Chongqing, China
Sep 2017 - Jun 2021

RESEARCH INTERESTS

- **Natural Language Processing:**
 - Enhancing the long-context capability of LLMs.
 - Utilising LLMs by parameter-efficient way.
 - Exploring the scaling ability of linear RNN (state-space model).

PUBLICATIONS

- **Guanzheng Chen**, Qilong Feng, Jinjie Ni, Xin Li, Michael Qizhe Shieh, **Long Context Inference with Retrieval-Augmented Speculative Decoding**
In submission to Forty-Second International Conference on Machine Learning (*ICML 2025*).
- **Guanzheng Chen**, Xin Li, Michael Qizhe Shieh, Lidong Bing, **LongPO: Long Context Self-Evolution of Large Language Models through Short-to-Long Preference Optimization**
Accepted to The Thirteenth International Conference on Learning Representations (*ICLR 2025*).
- **Guanzheng Chen**, Xin Li, Zaiqiao Meng, Shangsong Liang, Lidong Bing, **CLEX: Continuous Length Extrapolation for Large Language Models**
Accepted to The Twelfth International Conference on Learning Representations (*ICLR 2024*).
- Sicong Leng, Hang Zhang, **Guanzheng Chen**, Xin Li, Shijian Lu, Chunyan Miao, Lidong Bing, **Mitigating Object Hallucinations in Large Vision-Language Models through Visual Contrastive Decoding**
Accepted to Conference on Computer Vision and Pattern Recognition 2024 (*CVPR 2024*).
- **Guanzheng Chen**, Fangyu Liu, Zaiqiao Meng, and Shangsong Liang, **Revisiting Parameter-Efficient Tuning: Are We Really There Yet?**
Accepted to The 2022 Conference on Empirical Methods in Natural Language Processing (*EMNLP 2022, Oral Presentation*).

- **Guanzheng Chen**, Jinyuan Fang, Zaiqiao Meng, Qiang Zhang and Shangsong Liang, **Multi-Relational Graph Representation Learning with Bayesian Gaussian Process Network**
Accepted to Thirty-Sixth AAAI Conference on Artificial Intelligence (*AAAI 2022*).

RESEARCH PROJECTS

- **SeaLLMs: Large Language Models for Southeast Asia** Hangzhou, China & Singapore
 - **Research Objective:** Worked on a family of pretrained large language models for Southeast Asian (SEA) languages, which mainly consists of Vietnamese, Indonesian, Thai, along with those in English and Chinese. Our customized training process helps enhance our models' ability to understand, respond, and serve communities whose languages are often neglected by previous English-dominant LLMs, while outperforming existing polyglot LLMs, like BLOOM or PolyLM.
 - **Outcome:** The family of SeaLLMs would be released and publicly available, contributing to the community of polyglot LLMs.
 - **Personal Contribution:** Design the strategy for low-quality data filtering, using the FastText and Ken-LM, to prepare a cleaned corpus for the pertaining of SeaLLMs.
- **VideoLLaMA 2 & 3** Hangzhou, China & Singapore
 - **Research Objective & Outcome:** A series of multimodal foundation models with frontier image and video understanding capacity.
 - **Personal Contribution:** Design the strategy for synthetic caption generation.

RESEARCH EXPERIENCE

Alibaba DAMO Academic <i>Research Intern</i> , Mentor: Dr. Xin Li	Hangzhou, China Apr 2023 - Now
Tencent AI Lab <i>Research Intern</i> , Mentor: Dr. Yong Dai	Shenzhen, China Oct 2022 - Feb 2023
University of Glasgow <i>Research Assistant</i> , Supervisor: Dr. Zaiqiao Meng	Glasgow, UK Jun 2022 - Sep 2022

HONORS & AWARDS

- National Scholarship for Postgraduates (<1%) Sep 2022
- SYSU Excellent Student Scholarship (<20%) Sep 2021 & Sep 2022 & Sep 2023
- CQU Excellent Student Scholarship (<30%) Sep 2020 & Sep 2019 & Sep 2018

TEACHING & REVIEW SERVICE

Teaching Assistant:

- *Machine Learning*, Sun Yat-sen University Fall 2022
- Instructor: Shangsong Liang

External Reviewer:

- IJCAI 2023, SIGIR 2023, AAAI 2022, SDM 2022, ACL Rolling Review (Nov.), SIGIR 2022

Courses and Skills

- **Selected Courses:**

- Mathematics: Advanced Mathematics, Linear Algebra, Probability & Mathematical Statistics, Discrete Mathematics, Mathematical and Interdisciplinary Modeling
- Machine Learning: Machine Learning, Pattern Recognition
- Computer Science: Computer Networks, Operating Systems, Computer Composition Principle
- **Programming languages & machine learning tools:**
C++, Python, Verilog, Tensorflow, Pytorch, LaTeX
- **Languages:**
Mandarin, English