GUANZHENG CHEN

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Google Scholar Github

EDUCATION

National University of Singapore Singapore
PhD Student (First Year), School of Computing Aug 2024 - ?
Supervisor: Dr. Michael Qizhe Shieh

Sun Yat-sen University Guangzhou, China
Master Student (Third Year), Computer Science and Engineering Sep 2021 - Jun 2024
Supervisor: Dr. Shangsong Liang

Chongqing University Chongqing, China
Bachelor Degree, Computer Science Sep 2017 - Jun 2021

RESEARCH INTERESTS

- **Large Language Model (LLM):**
  - Enhancing the context utilization capability of LLMs
    - long and/or multimodal context.
    - new paradigm beyond full attention.
  - Unified multimodal LLM with new architecture.

PUBLICATIONS

- **Guanzheng Chen***, Qilong Feng*, Jinjie Ni, Xin Li, Michael Qizhe Shieh, **RAPID: Long Context Inference with Retrieval-Augmented Speculative Decoding**
  Accepted at Forty-Second International Conference on Machine Learning (***ICML 2025, Spotlight***).

- **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 at 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 at 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 at 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 at 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 at Thirty-Sixth AAAI Conferene 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 Hangzhou, China
Research Intern, Mentor: Dr. Xin Li Apr 2023 - Now

Tencent AI Lab Shenzhen, China
Research Intern, Mentor: Dr. Yong Dai Oct 2022 - Feb 2023

University of Glasgow Glasgow, UK
Research Assistant, Supervisor: Dr. Zaiqiao Meng Jun 2022 - Sep 2022

HONORS & AWARDS

- National Scholarship (<1%) Sep 2022
- NUS Research Scholarship 2024 - 2028

TEACHING & REVIEW SERVICE

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

Reviewer:
- ACL Roling Review, Neurips 2024, ICLR 2025, ICML 2025

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, Pytorch, Triton

- **Languages:**

  Mandarin, English