GUANZHENG CHEN

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Google Scholar Github

Education

- **Sun Yat-sen University** Guangzhou, China
  Master Student (Second Year), Computer Science and Engineering 09/2021 - 07/2024
  GPA: 90.7/100
  Advisor: Dr. Shangsong Liang

- **Chongqing University** Chongqing, China
  Bachelor Degree, Computer Science 09/2017 - 06/2021
  GPA: 3.61 / 4.0

Research Interests

- **Natural Language Processing:**
  - Facilitating large language models with knowledge for understanding and generation.
  - Utilising large-scale pretrained language models by parameter-efficient way.
  - Diffusion models for text generation.

- **Knowledge Graph:**
  - Knowledge injection for language models.
  - Knowledge graph representation.

Publications

- **Guanzheng Chen**, Fangyu Liu, Zaiqiao Meng, and Shangsong Liang, **Revisiting Parameter-Efficient Tuning: Are We Really There Yet?**
  Accepted in 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 in Thirty-Sixth AAAI Conferene on Artificial Intelligence (***AAAI 2022***).

Research Projects

- **Sun Yat-sen University** Guangzhou, China
  Master Student, supervised by Prof. Shangsong Liang 09/2021 - Present
  - **GGPN**: Worked on the representation learning problem of multi-relation graph (e.g., knowledge graph) and introduced Gaussian Process model into graph neural network for learning stochastic embeddings to improve noisy multi-relational graph. The outcome of this project has been accepted in AAAI 2022 as a main conference paper.

- **PETuning**: Worked on investigating the parameter-efficient tuning (PETuning) methods for large-scale pretrained language models and pointed out the performance and stability issues of PETuning methods compared with finetuning. The outcome of this project has been accepted in EMNLP 2022 as a main conference paper (oral).

- **Diffusion for Text Generation (Current Work)**: Worked on incorporating diffusion model with pretrained autoregressive language model to learn the joint sequential distribution for open-ended and conditional text generation. The outcome of this project would be submitted to TACL or NeurIPS 2023.

Research Activities

- **External Reviewer:**

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

- **Poster Presentation:**

  - **AAAI 2022** February 22-March 1, 2022, Virtual
    Multi-Relational Graph Representation Learning with Bayesian Gaussian Process Network

- **Oral Presentation:**

  - **EMNLP 2022** December 7-11, 2022, Virtual
    Revisiting Parameter-Efficient Tuning: Are We Really There Yet?

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