Yan Ma

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Education

- **Ph.D. Student in Computer Science** — **Fudan University**
  Advisor: Prof. Pengfei Liu and Prof. Yu Qiao — *2023.09 – 2027.06 (expected)*
- **Master in Computer Application Technology** — **Fudan University**
  Advisor: Prof. Wei Li — *2020.09 – 2023.06*
- **Bachelor in Computer Science and Technology** — **Dalian University of Technology**
  GPA: 4.076/5, Rank: 12/123 — *2016.09 – 2020.06*

Research Interests

I have a broad interest in creating and generating virtual content. Currently, my primary research interests lie in **language model-driven storytelling**, including: 1) High-quality and diverse long text-based narratives, 2) Vision-text consistent multi-modal storytelling, 3) Video storytelling / Physically-aware world model.

Projects

- **RL Plot: Reinforcement Learning Plot Library [link] (☆ 20+)**
  - An highly encapsulated RL plot library, including basic error bar lineplot and a wrapper to *rliable*.
- **Awesome-Story-Generation [link] (☆ 180+)**
  - An extensive list of awesome papers about Story Generation / Storytelling, primarily focusing on the era of Large Language Models (LLMs).

Experience

- Shanghai AI Laboratory - Research Intern, Advisor: Pengfei Liu and Yu Qiao — *2023.07 - Now*
- Netease Games AI Laboratory - Research Intern, Advisor: Siji Xu — *2022.07 - 2022.09*

Publications

- **MoPS: Modular Story Premise Synthesis for Open-Ended Automatic Story Generation**
  Annual Meeting of the Association for Computational Linguistics (ACL), 2024
  Yan Ma, Yu Qiao, Pengfei Liu
  - We introduce Modular Story Premise Synthesis (MoPS), a method that modularizes and automates the generation of diverse, high-quality story premises, improving the quality of subsequent novels and scripts.
- **Open-Ended Diverse Solution Discovery with Regulated Behavior Patterns for Cross-Domain Adaptation** [PDF]
  Association for the Advancement of Artificial Intelligence (AAAI), 2023
  Kang Xu, Yan Ma, Bingsheng Wei, Wei Li
  - Focus on regulated diverse behavior pattern discovery in Diversity-driven Reinforcement Learning, which can facilitate cross-domain adaptation.
- **Dynamics-aware Novelty Search with Behavior Repulsion** [PDF]
  Genetic and Evolutionary Computation Conference (GECCO), 2022
  Kang Xu, Yan Ma, Wei Li
  - We present a hybrid Quality-Diversity paradigm that evolves high-performing solutions by introducing a generalized novelty measurement and a bidirectional gradient-based mutation operator.
- **Evolutionary Action Selection for Gradient based Policy Learning** [PDF]
  International Conference on Neural Information Processing (ICONIP) 2022 (Oral)
  Yan Ma, Tianxing Liu, Bingsheng Wei, Yi Liu, Kang Xu, Wei Li
  - Focus on inefficiency and brittleness in Evolutionary Reinforcement Learning (ERL) due to the utilization of Evolutionary Algorithms (EA) to optimize high-dimensional parameter space of policy network.

Programming Skills

- **Languages**: Python, Bash, Markdown, Latex **Technologies**: Pytorch, Jax, DeepSpeed, NeoVim, Tmux, Git