City, Beijing
(86)15021473236
changma@pku.edu.cn

Chang Ma

https://github.com/chang-github-00

Senior undergraduate at Peking University, focusing on various machine learning topics.
Areas of expertise: Representation Learning, Natural Language Processing, Computational Biology

Experience

Research Assistant **July 2019 —**
Sigma Lab Peking University

- Supervised by Prof.Zhihong Deng.
- Work on Representation Learning via information theory, and its application in domain adaptation, adversarial robustness, and pre-training. Previously worked on optimization mechanism of gates in LSTM models.
- Research results include two papers under review.

Research Intern **January 2021 —**
DeepGraph Lab MILA - Quebec AI Institute

- Supervised by Prof.Jian Tang.
- **Project Protein-ligand Docking**: use geometric learning methods as well as bi-level optimization negative sampling technique to dock small molecules on proteins. Achieve results comparable to SOTA.
- **Development of the TorchDrug Platform**: work on a general geometric learning platform that aims at making AI-based drug discovery accessible to all scientists.
- **Project Multi-task Learning on Proteins**: pre-train protein language models with multi-task learning on various protein tasks. The project will be released on TorchDrug platform.

Research Collaboration **June 2021 — October 2021**
NAIL Lab Nanyang Technology University

- Supervised by Prof.Ahn Tuan Luu.
- **Project QA Generation**: generate coherent question-answer pair from unstructured text with mutual information maximization.
- **Project Certified Robustness**: provide certified robustness for general text perturbation on large pre-trained models.

Education

PhD, Computer Science, HongKong University, co-advised by Prof.Lingpeng Kong and Prof.Tao Yu **September 2022(expected)–**
Bachelor of Science, Machine Intelligence Major, Peking University, GPA: 3.58/4.0 **September 2021 — July 2022(expected)**

Technical Skills

Programming/Scripting Python,C++,Javascript, PyTorch,LaTex
English Toefl 110/120, GRE 330/340

Publications

- Domain Adaptation via Maximizing Surrogate Mutual Information
- a student abstract under review in AAAI 2022 (on few-shot text generation)
- invited talk at IJTCS 2021, CTM sub-conference (on forgetting mechanism)

Awards & Honors

2019 First Prize (**National Mathematical Modeling Competition for College Students**)
2019 Honorable Mention (**Mathematical Contest In Modeling**)
2020 Peking University Learning Excellence Award

Service

2021 Teaching assistant for course ”Introduction to Artificial Intelligence —— Natural Language Processing”