PEI CHEN

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EDUCATION

Ph.D. Candidate in Computer Science 2019.8 - 2023.12 (expected)
· Research Areas: Natural Language Processing;
· Research Interests: Large Language Model Pretraining and Prompting, Information Extraction;
· Overall GPA: 4.0/4.0 till now.
Texas A&M University

MS in Finance 2016.9 – 2018.6
· Thesis: Does News Sentiment Predict the Stock Market? An Example on Chinese Growth Market;
· Received 2017 National Scholarship for Graduate Student;
· Overall GPA: 3.9/5.0, ranking 1/178.
Southwestern University of Finance and Economics

B.Engr. in Simulation Engineering 2010.9 – 2014.6
· Thesis: Analyze and reconstruct the multi-resolution modeling technology of a simulation system written by millions of lines of C++ code;
· Overall GPA 88.61/100, ranking 1/45.
National University of Defense Technology

EXPERIENCE

Open Source AI Team, AWS AI 2023.5 – 2023.8
Applied Scientist (Intern) *Santa Clara, CA*

Doing research on designing cutting-edge automatic prompting methods for large language models.

Bedrock Team (Amazon Titan Model), AWS AI 2022.6 – 2023.1
Applied Scientist (Intern) *Santa Clara, CA*

Pretrained large language models in AWS clusters; proposed a novel tabular language model that models tables as hypergraphs and learns better table representations for improving table understanding tasks.

Tencent AI Lab 2021.6 – 2021.8
NLP Researcher (Intern) *Seattle, WA*

Proposed a comprehensive benchmark for zero-shot knowledge base completion (KBC) tasks, covering state-of-the-art KBC methods and broad knowledge source data.

Department of Computer Science & Engineering, Texas A&M University 2019.9 – 2023.5
Research Assistant and Teaching Assistant *College Station, TX*

Research: Improved domain-specific named entity recognition task by modeling non-sequential entity mention relations using Graph Neural Networks; Improved fine-grained opinion mining task; Built fine-grained named location recognition benchmark, etc.
Teaching: CSCE 636 Deep Learning; CSCE 313 Computer Systems

National Lab of Pattern Recognition, Chinese Academy of Sciences 2018.1 – 2019.8
Research Engineer *Beijing, China*

Improved the event extraction and causality detection tasks from financial domain texts.

Innovation Lab of Global Exchange, State Street 2017.7- 2018.1
Data Analyst (Intern) *Hangzhou, China*

Working on data cleaning, analysis, visualization and database construction for innovative financial applications.

PUBLICATIONS

Pei Chen, Soumajyoti Sarkar, Leonard Lausen, Balasubramaniam Srinivasan, Sheng Zha, Ruihong Huang, and George Karypis. "HYTREL: Hypergraph-enhanced Tabular Data Representation Learning.", NeurIPS 2023 (**spotlight**).

Pei Chen, Wenlin Yao, Hongming Zhang, Xiaoman Pan, Dian Yu, Dong Yu, and Jianshu Chen. "ZeroKBC: A Comprehensive Benchmark for Zero-Shot Knowledge Base Completion." ICDM-2022, KG workshop.

Pei Chen, Haotian Xu, Cheng Zhang, and Ruihong Huang. "Crossroads, Buildings and Neighborhoods: a Dataset for Fine-grained Location Recognition". NAACL-2022, long paper, acceptance rate: 21.96%.

Pei Chen, Haibo Ding, Jun Araki, and Ruihong Huang. "Explicitly Capturing Relations between Entity Mentions via Graph Neural Networks for Domain-specific Named Entity Recognition." ACL-2021, short paper, acceptance rate: 21.2%.

Pei Chen, Kang Liu, Yubo Chen, Taifeng Wang, and Jun Zhao. "Probing into the Root: A Dataset for Reason Extraction of Structural Events from Financial Documents." EACL-2021, short paper, acceptance rate: 24.7%.

Pei Chen, Hang Yang, Kang Liu, Ruihong Huang, Yubo Chen, Taifeng Wang, and Jun Zhao. "Reconstructing Event Regions for Event Extraction via Graph Attention Networks." AACL-2020, long paper, acceptance rate: 28.3%.

SKILLS

Competent: Python, PyTorch, PyTorch Lightning, Git, Docker

Familiar: C/C++, TensorFlow, Keras, SQL

Experienced: Parallel pretraining and training with multiple GPUs and machines.

PROFESSIONAL SERVICE

2023: Program Committee/Reviewer for ACL, EMNLP

2022: Program Committee/Reviewer for EMNLP, ACL Rolling Review, NLPCC

2021: Program Committee/Reviewer for EMNLP, ACL Rolling Review, NLPCC