BINGJUN GUO

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EDUCATION

University of Illinois Urbana-Champaign *Urbana-Champaign, US* — *Sep. 2021 – present*
Bachelor of Science in Computer Engineering — *GPA: 3.91/4.0*

Zhejiang University *ZJU-UIUC Institute, Haining, China* — *Sep. 2021 – present*
Bachelor of Engineering in Electrical and Computer Engineering — *GPA: 3.98/4.0*

RESEARCH INTERESTS

My research experiences are about representation learning on structured data in various modalities, while my major is about understanding computer and electronic systems at all abstract levels. I also have educational experiences in neuroscience, metaphysics, and epistemology. Ultimately, I am looking forward to utilizing all of them for the development of artificial intelligence which is seriously intelligent.

RELEVANT EXPERIENCES

Large Language Models Augmented Data Cleaning Framework — *Jun. 2023 – Aug. 2023*
Summer Research Program, Center of Data Science, ZJU

- Developed a representative learning model for heterogenous tabular data adopting transfer learning with pretrained language models
- Designed a pipeline with cutting edge error detecting and data cleaning methods achieving an ideal performance on representing dirty datasets
- Experimented on improving model robustness through few-shot prompting to LLaMA-7B
- Gained a comprehensive and detailed understanding of all mainstream deep-learning-based language models

Review on Knowledge Graph Representation Methods — *Jun. 2022 – Jul. 2022*
Summer Research Project, ZJU-UIUC Institute

- Experimented concurrent embedding approaches for knowledge graphs including TransE, TransH, TransR, etc. on distinguished datasets
- Analyzed differences between the performances tracing back to features of datasets and model structure
- Developed a first understanding of representative learning, knowledge engineering as well as skills to set up the research environment

RELATED COURSE WORK

Overview

- A+ or A in all Physics, Philosophy, and Rhetoric courses
- A or A+ in Computer Systems Engineering, Data Structures, Database Systems, Probability with Engineering Applications, Discrete Math, Field & Waves I, and Analog Signal Processing
- A- in the other Mathematics courses including Calculus II&III, Linear Algebra (actually given as Matrix Analysis combined with Abstract Algebra), and Differential Equations

A Unix-like Operating System — *Fall 2023*

- Mainly responsible for developing the terminal, which requires sufficient familiarity with all x86 OS features including interrupts, scheduling, virtual memory, and file system; Synchronization skill is especially valued
- Developed additional functions such as command history, auto-command-completion, and mouse cursor

HONORS & AWARDS

Outstanding Summer Research Project — *Dec. 2023*
(~top 20% in ZJU-UIUC Institute)

Mathematical Contest in Modeling *Finalist* — *Feb. 2023*
(~top 1.5% worldwide)

SKILLS & LANGUAGE QUALIFICATION

- Programming Languages: Python (including PyTorch, Keras, Transformers, etc.), C/C++, x86 assembly
- Mathematics Tools: MATLAB, SageMath
- Database Systems: mySQL, Neo4j, MongoDB
- Others: ancient Chinese divination; considerable singing skill in bass, baritone, and tenor

TOEFL *110/120* — *Feb. 2023*