

Jiayuan Huang

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Education

Carnegie Mellon University

Pittsburgh, PA

Master of Science in Intelligent Information Systems

Dec. 2022

- Relevant Coursework: Distributed Systems, Machine Learning with Large Datasets

Zhejiang University

Hangzhou, China

Bachelor of Engineering in Electronic and Computer Engineering | GPA: 3.85/4.00

Jun. 2021

- Selected Honors: Top 20 of Student Academic Achievements of Zhejiang University (2020), 3rd Scholarship of Zhejiang University (2018,2019), Dean's List (2019), Student Leadership Award (2018,2019), Student Volunteer Award (2018, 2019)

University of Illinois at Urbana-Champaign

Champaign, IL

Bachelor of Science in Computer Engineering | GPA: 3.78/4.00

May. 2021

- Relevant Coursework: Communication Networks, Applied Parallel Programming, Natural Language Processing

Publications

- **J. Huang**, Y. Du, S. Tao, K. Xu, P. Xie. "Structured Self-Supervised Pretraining for Commonsense Knowledge Graph Completion" (Accepted by ACL)
- Y. Du, **J. Huang**, S. Tao, H. Wang. "Knowledge Graph Construction for Intelligent Maintenance of Power Plants," 28 Nov 2019, Advances in E-Business Engineering for Ubiquitous Computing (IEEE ICEBE 2019)

Research Experience & Projects

Commonsense Knowledge Graph Complementation

Remote

ECE Department, University of California San Diego

Jun. 2020 - Mar. 2021

- Collaborated with a team of three to propose several approaches that leverage the high-order structure in Commonsense Knowledge Graph (CKG) to successfully capture unobvious relationships between concepts
- Implemented transformer models including BERT, GPT2, BART for structured pretraining and finetuning on CKG completion that achieved 12% lower perplexity than previous state-of-the-art work
- Published *Structured Self-Supervised Pretraining for Commonsense Knowledge Graph Completion* in Transactions of the Association for Computational Linguistics (ACL) as the co-first author

Knowledge Graph Construction for Intelligent Maintenance of Power Plant

Hangzhou, China

CS Department, Zhejiang University

Apr. 2019 - Jun. 2020

- Provided power plants with intelligent operation services, such as maintenance reference and intelligent reasoning and searching, by constructing knowledge graphs from maintenance reports
- Built an end-to-end neural network model to process the maintenance report automatically, extracted the key information, and then generated the knowledge graph
- Published *Knowledge Graph Construction for Intelligent Maintenance of Power Plant* in ICEBE 2019 as the second author

Design of Operating System

Champaign, IL

ECE Department, University of Illinois at Urbana-Champaign

Sept. - Dec. 2019

- Implemented x86-based operating system from scratch in collaboration with a team of four, including memory paging and segmentation, file system and multi-process scheduling that can support 3 terminals and 6 processes running concurrently

Work Experience

Zhejiang Feirong Robot Science and Technology Co., Ltd.

Hangzhou, China

Test Engineer Intern

Jun. - Jul. 2018

- Assisted in testing and debugging cloud platforms and writing testing cases
- Collaborated with developers to identify defects and optimize software

Leadership & Extra-curricular Activities

- **Teaching Assistant**, ECE 120 - Introduction to Computing (UIUC) Jan. 2021 – May 2021
- **Reviewer**, Thirty-Fifth AAAI Conference on Artificial Intelligence Nov. 2020
- **Chairman**, Students' Association Union of International Campus, Zhejiang University Aug. 2018 - Aug. 2019
- **Volunteer Leader**, Rural Community Development Program, Sri-Lanka Aug. 2018

Skills

Programming Languages: Python, C++, Java

Deep Learning Frameworks: TensorFlow, PyTorch