Jiayuan Huang

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Education

Carnegie Mellon University — Pittsburg, PA
Master of Science in Intelligent Information Systems — Aug. 2021 - Dec. 2022

Zhejiang University — Hangzhou, China
Bachelor of Engineering in Electronic and Computer Engineering | GPA: 3.85/4.00 — Sept. 2017 - 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 — Aug. 2017 - May. 2021
- Relevant Coursework: Data Structures (A+), Communication Networks (A), Artificial Intelligence (A+), Natural Language Processing (A), Digital Systems Laboratory (A+), Applied Parallel Programming (A), Machine Learning (A)

Publications

- **J. Huang**, Y. Du, S. Tao, K. Xu, P. Xie. "Structured Self-Supervised Pretraining for Commonsense Knowledge Graph Completion" (Accepted by TACL)
- 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 — **Supervisor:** Prof. Pengtao Xie
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 achieve 12% lower perplexity than previous state-of-the-art work
- Published a paper on *Transactions of the Association for Computational Linguistics* (TACL) as the co-first author

Knowledge Graph Construction for Intelligent Maintenance of Power Plant — **Supervisor:** Prof. Hongwei Wang
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 — **Supervisor:** Prof. Steven S. Lumetta
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 — 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

- ***Reviewer,*** reviewer in 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
- ***Teaching Assistant***, ECE 120 - Introduction to Computing (UIUC) — Jan. 2021 - Present

Skills

Programming Languages: Python, C++, Java
Deep Learning Framework: TensorFlow, PyTorch