

# Jiayuan Huang

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## Education

### Zhejiang University

*BEng in Electronic and Computer Engineering*

Hangzhou, China

Sept. 2017 - Jun. 2021

- GPA: 3.85/4.00
- Selected Honors: Top 20 of Student Academic Achievements of Zhejiang University (2020), 3<sup>rd</sup> Scholarship of Zhejiang University (2018,2019), Dean's List (2019), Student Leadership Award (2018,2019)

### University of Illinois at Urbana-Champaign

*BS in Computer Engineering*

Champaign, United States

Aug. 2017 - May. 2021

- GPA: 3.78/4.00
- Relevant Coursework: Data Structures (A+), Computer System & Programming (A), Artificial Intelligence (A+), Natural Language Processing (A), Digital Systems Laboratory (A+), Applied Parallel Programming (A)

## Publications

- 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 (Best Paper Award ICEBE 2019)
- **J. Huang**, Y. Du, S. Tao, K. Xu, P. Xie. "Structured Pretraining for Commonsense Generation" (Accepted by TACL)
- T. Xie, **J. Huang**, Y. Du, S. Tao, Q. Li, H. Wang "A Deep-Learning Based Framework for Construction and Reasoning of Knowledge Graph from Power Plant Operation Report" (submitted to IEEE Access)

## Research Experience & Projects

### Commonsense Knowledge Graph Complementation

ECE Department, University of California San Diego

**Supervisor:** Prof. Pengtao Xie

Jun. 2020 – Mar. 2021

- Commonsense Knowledge Graph (CKG) is needed to develop commonsense-grounded NLP applications, but it is time-consuming to construct CKGs manually.
- Proposed several approaches that leveraged the high-order structure in CKGs to capture the high-order relationships between concepts. Human evaluation and automatic evaluation results demonstrated the effectiveness of our methods.
- Paper accepted by TACL as the co-first author.

### Knowledge Graph Construction for Intelligent Maintenance of Power Plant

ECE Department, Zhejiang University

**Supervisor:** Prof. Hongwei Wang

Apr. 2019 - June. 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 automatically process the maintenance report, 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; Awarded **Best Paper Award**.

### Design of Operating System

ECE Department, University of Illinois at Urbana-Champaign

**Supervisor:** Prof. Steven S. Lumetta

Sept. 2019 - Dec. 2019

- Implemented x86-based operating system from scratch in collaboration with a team, including memory paging and segmentation, drivers of peripheral equipment, and multi-process scheduling.
- Developed file system and multi-process scheduling; wrote drivers for keyboard and RTC in C.

## Industry Experience

### Zhejiang Feirong Robot Science and Technology Co., Ltd.

*Test Engineer*

Hangzhou, China

Jun. 2018 - Jul. 2018

- Responsible for debugging the developed cloud platforms and setting up the testing environment.
- Collaborated with developers to identify defects and optimize developed software.

## Community Services & Extracurricular Activities

- **Reviewer**, the 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