# Jiayuan Huang

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## EDUCATION

**Zhejiang University**                                                                                                      Hangzhou, China
- Bachelor of Engineering in Electronic and Computer Engineering;Overall GPA: 3.87/4.00        Sept 2017 – Jun 2021
- Honors: Top 20 of Qizhen Cup of Student Academic Achievements of Zhejiang University (2020), 3rd Scholarship of Zhejiang University (2018, 2017), 3rd Scholarship of ZJUI Institute (2018, 2017), Best Paper Award (The 2019 ICEBE conference) (2019), Excellent Summer Practice Project of Zhejiang University (2019), Excellent League Member (2019), Chancheng Social Practice Scholarship (2018), Top 10 Summer Practice Team Leader of Zhejiang University (2018)

**University of Illinois at Urbana-Champaign (ZJU-UIUC Institute)**                                        IL, US
Bachelor of Science in Computer Engineering; GPA: 3.72/4.00                                        Sept 2019 – Jun 2020
- Relevant Coursework: Data Structures & Software Principles; Computer System Organization; Computer System Engineering; Artificial Intelligence; Natural Language Processing; Algorithms and Models of Comp

## RESEARCHING EXPERIENCE & PROJECT

**Knowledge Graph Complementation and Dialogue System**                                                IL, US
Researcher under Prof. Pengtao Xie, UC San Diego                                                    Jun 2020-Present
- Optimized the NPL models such as GPT2 and BERT by applying the knowledge graph of ConceptNet and ATMOIC; Extracted the information from the corpus models to improve AI dialogue systems
- Optimized the current knowledge graph to generate a logical knowledge chain automatically; Adopt different pre-trained methods to improve the performance of the knowledge graph complement; One paper has been submitted

**Final Project, Digital System Laboratory**                                                                Haining, China
Researcher under Prof. Chushan Li, Zhejiang University                                                May 2020-Sept 2020
- Designed and implemented a game based on FPGA board by collaborating with the team, including game logic and drivers for peripheral equipment in C and FPGA programming in System Verilog
- Implementing an advanced version of the original Pacman game, focusing on adding multi-player mode and designing Ghost AI in System Verilog

**Final Project, Design of Operating System**                                                                IL, US
Researcher under Prof. Steven S. Lumetta, UIUC                                                        Sept 2019-Dec 2019
- Worked in a team project of x86-based operating system implementation from scratch, including memory paging and segmentation, drivers of peripheral equipment and multi-process scheduling
- Developed multi-process scheduling and the file system; wrote drivers for keyboard and RTC in C and x86

**Knowledge Graph Construction for Intelligent Maintenance of Power Plant**                        Hangzhou, China
Researcher under Prof. Hongwei Wang, Zhejiang University                                            Apr 2019-Jun 2020
- Extracted knowledge and data from massive non-structured power plant maintenance reports and built a knowledge graph on the relationship between knowledge entities; Established a framework for knowledge graph for power plants with AI Design and Manufacturing, Knowledge Grant Construction, Mining and Retrieval, Knowledge Management and Knowledge-Based Engineering
- Applied Bi-LSTM-Lattice Model to extract named entities on power plants filed and compared with other models in strengths and weakness
- Published *Knowledge Graph Construction for Intelligent Maintenance of Power Plant* in ICEBE 2019 as the second author and awarded the Best Paper Award of Zhejiang University

## PUBLICATIONS

- Yangkai Du, **Jiayuan Huang**... "Knowledge Graph Construction for Intelligent Maintenance of Power Plants", 28-Nov 2019, *ICEBE 2019 Advances in E-Business Engineering for Ubiquitous Computing*
- Tingyu Xie, **Jiayuan Huang**... "A Deep-Learning Based Framework for Construction and Reasoning of Knowledge Graph from Power Plant Operation Report" (in submission)

## WORKING EXPERIENCE

**Zhejiang Feirong Robot Science and Technology Co., Ltd.**                                            Hangzhou, China
Test Engineer                                                                                                Jun 2018-Jul 2018
- Responsible for writing test scripts, maintaining test environment, generating test reports of cloud platforms
- Collaborated with developers to identify the root cause and optimize the products

## EXTRACURRICULAR ACTIVITIES

- **Assistant Supervisor**, UIUC graduate class of exchange students in Zhejiang University        Aug. 2020-Present
- **Monitor,** Electronic and Computer Engineering Class of Zhejiang University                    Jun. 2019-Jun 2019
- **Chairman,** 2nd Student Congress of International Campus of Zhejiang University                Jun 2019-Jun 2019
- **Director,** Student Association Consulting Center of Zhejiang University                        Jun 2018-Jun 2019

## ADDITIONAL INFORMATION

- Computer Skills: Python, C++, C, MATLAB, TensorFlow, PyTorch, Git
- Interests: Erhu (Level 10 of National Erhu Performance (Amateur))