

# Mighty Weiqi, Wang 王伟琪

2000/08 UG-Year3

Updated on 2021/2/24



## 1. Education

- *Sep. 2018 – Now* **The Hong Kong University of Science and Technology** (CGA: **3.895**/4.300)
  - ◆ First Major: **Bachelor's Degree in Computer Science** (CGA: **3.900**/4.300)
  - ◆ Second Major: **Bachelor's Degree in Mathematics** (CGA: **3.986**/4.300)
  - ◆ Self-Learning: Programming with Python @Coursera, CS224N, CS231N @Stanford University Website
- *Sep. 2015 – Jun. 2018* **The Beijing No.8 Middle School** (Rank: **5**/306)
  - ◆ High School's Diploma in Science

## 2. Research Experience

- **Commonsense Knowledge Base Population**  
(Undergraduate Research Assistant)  
(Supervisor: [Prof. Yangqiu Song](#), HKUST, Jan. 2021 – May. 2021)
  - \* We aim to populating the current commonsense knowledge bases including ATOMIC, ConceptNet, Probase, Glucose with ASER to generate a unified knowledge base under a consistent schema.
  - \* Details of this project will be made public in April/May 2021 once submitted to Arxiv.
  - \* To be submitted to EMNLP2021.
- **DISCOS: Bridging the Gap between Discourse Knowledge and Commonsense Knowledge**  
(Undergraduate Research Assistant)  
(Supervisor: [Prof. Yangqiu Song](#), HKUST, Sep. 2020 – Dec. 2020)
  - \* We propose an alternative commonsense knowledge acquisition framework **DISCOS** (from DIScourse to COMmonSense), which automatically mines expensive complex commonsense knowledge from more affordable linguistic knowledge resources.
  - \* Experiments demonstrate that we can successfully convert discourse knowledge over eventualities from ASER, a large-scale discourse knowledge graph, into inferential if-then commonsense knowledge defined in ATOMIC without any additional annotation effort.
  - \* Further study suggests that DISCOS significantly outperforms previous supervised approaches in terms of novelty and diversity with comparable quality.
- **Data-driven Smart Assessment of Room Air Conditioner Efficiency for Saving Energy**  
(Undergraduate Research Assistant)  
(Supervisor: [Prof. Zhongming Lu](#), HKUST, Jun. 2020 – Jan. 2021)
  - \* We present a machine learning approach to identify non-inverter window air conditioners with low efficiency using climate data and smart meter data from the university student hall rooms.
  - \* Our result shows that the accuracy of XGBoost is 50~70% in estimating the hourly electricity consumption within a 10% error deviation range from the actual data.
  - \* We conclude that the AC is highly efficient if the predicted hourly electricity consumption increases as the outdoor temperature rises. In contrast, the AC efficiency is rated low-efficiency if the change of

outdoor temperature does not affect the prediction of the hourly electricity consumption. This conclusion is further verified by the AC replacement record.

### 3. Publications

#### ➤ Commonsense Knowledge Base Population

To be submitted to Empirical Methods of Natural Language Processing, 2021 (EMNLP2021)

#### ➤ DISCOS: Bridging the Gap between Discourse Knowledge and Commonsense Knowledge

(Tianqing Fang, Hongming Zhang, **Weiqi Wang**, Yangqiu Song, Bin He)

Published in the Proceedings of **The Web Conference, 2021 (WWW2021)** (357/1736=20.56%)

[Link to the paper](#), [link to the code](#)

#### ➤ Data-driven Smart Assessment of Room Air Conditioner Efficiency for Saving Energy

(**Weiqi Wang**, Zixuan Zhou, Zhongming Lu)

Under Review in **Applied Energy (APEN)** (IF=8.848)

[Link to the code](#)

### 4. Campus Experience

#### ➤ Subcommittee of Mainland Scholar and Students Society Undergraduate (MSSSUG)

(Sep. 2018 – Dec. 2018)

- \* Helped making the annual plan of the entire society.
- \* Hosted several society functions.

#### ➤ Student Teaching Helper in COMP1022P (CSE Department)

(Sep. 2019 – Nov. 2019)

- \* Grade student's lab work and answer their questions.

#### ➤ School of Engineering's Representative in Admission Interview (School of Engineering)

(Jan. 2020, Jul. 2020, Jan. 2021)

- \* Share my experience in HKUST as the representative of School of Engineering and answer their questions on admissions and studying & living in HKUST.

### 5. Language and Skills

#### ➤ Language: English (advanced), Mandarin (native), Cantonese (beginner)

#### ➤ Skills:

- \* **Advanced:** Python, **Proficient:** C++, Java, **Basic:** HTML5, JavaScript
- \* **Proficient** with PyTorch, TensorFlow, Keras, Scikit-Learn
- \* **Currently working on Knowledge graphs and GNNs.**

### 6. Scholarships and Honors

#### ➤ Dean's List for the School of Engineering in Fall 2018, Fall 2019, Fall 2020.

#### ➤ University's Scholarship Scheme for Continuing Undergraduate Students in 2019-2020 and 2020-2021

### 7. Contact Me!

- This email: [1874240442@qq.com](mailto:1874240442@qq.com) will be active all the time!
- You are also welcomed to visit my personal webpage <https://mighty-weaver.github.io/>!
- My current address is Room 3007, Cheng Yu Tung Building, HKUST, Sai Kung, Hong Kong SAR, China