

# Mu Chun Wang

Email: amoswang2000@mail.ustc.edu.cn | Tel: (+86)15955149610

---

## EDUCATION

University of Science and Technology of China

*Aug. 2018 ~ present*

School of Data Science

**Overall GPA:** 3.55/4.3 (86/100)

Course Highlights: Probability and Mathematical Statistics A (95), Fundamental of Artificial Intelligence (91), Fundamental of Data Science (93), Computer Vision (95), Linear algebra (92), Stochastic Process (93)

## RESEARCH INTERESTS

Information Retrieval; Natural Language Processing; Machine Learning; Computer Vision; Statistics; Reinforcement Learning.

## PUBLICATIONS

**Textomics: A Dataset for Genomics Data Summary Generation**

Mu-Chun Wang\*, Zixuan Liu\*, Sheng Wang

**ACL'22 Main Conference.**

**Analyzing and Simulating User Utterance Reformulation in Evaluating Conversational Recommender Systems.**

Shuo Zhang\*, Mu-Chun Wang\*, Krisztian Balog

In ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR'22**).

**RCD: Relation Map Driven Cognitive Diagnosis for Intelligent Education Systems.**

Weibo Gao, Qi Liu, Zhenya Huang, Yu Yin, Haoyang Bi, Mu-Chun Wang, Jianhui Ma, Shijin Wang and Yu Su

In ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR'21**).

## RESEARCH EXPERIENCE

**Topic: Textomics: A Dataset for Genomics Data Summary Generation**

*July. 2021 ~ Sep. 2021*

**Advisor: Prof. Sheng Wang; University of Washington, Seattle**

- We introduce Textomics, a novel dataset of genomics data description, which contains 22,273 pairs of genomics data matrix and its summary.
- Based on this dataset, we study two novel tasks: generating textual summary from genomics data matrix and vice versa.
- We further illustrate how Textomics can be used to advance other applications, including evaluating scientific paper embeddings and generating masked templates for scientific paper understanding.

**Topic: Simulating User Utterance Reformulation in Recommender Systems**

*Oct. 2020 ~ Feb. 2021*

**Advisor: Prof. Xiangnan He, Prof. Krisztian Balog, Dr. Shuo Zhang; LDS USTC and IAI Group**

- Analyzed the user utterance reformulation behaviors when facing conversational agent's failure.
- Proposed a t5-based utterance reformulation model, which can reformulate user utterances in certain type of reformulations. Experimental results on turing test and automatically metrics show that our method outperform baselines.

**Topic: Cognitive Diagnosis with Graph Neural Network**

*Jun. 2020 ~ Sep. 2020*

**Advisor: Prof. Qi Liu; BASE Lab USTC**

- Presented a novel Relation map driven Cognitive Diagnosis (RCD) framework, uniformly modeling the interactive and structural relations via a multi-layer student-exercise-concept relation map.
- Extensive experimental results on real-world datasets show the effectiveness of our RCD in both diagnosis accuracy improvement and relation-aware representation learning.

**Topic: Build Your Dream Smart Home (IoT system)**

*July. 2019 ~ Aug. 2019*

**Advisor: Prof. TAN Wee Kek; NUS School of Computing Workshop**

- Designing an application on IoT system from hardware to software. We simulate a intelligent house prototype which included website to control the furniture and a face detected intelligent locked door.
- Obtained the **first prize** of the entire workshop.

**Topic: LC3 Simulator and Assembler**

*Dec. 2019*

**Instructor: Prof. Hong An; Course: Introduction to Computer Systems(H)**

- Implemented a simulator and an assembler for LC3 in C language.
- Implemented extra functions like recording the running time and I-O interrupt.

**Topic: Image Segmentation Enhanced Style Transfer [code](#)**

*Oct. 2020 ~ Dec.2020*

**Instructor: Yang Cao; Course: Computer Vision**

- Contribution: Using the L0 smooth technique to enhance the segmentation performance.
- Proposed a novel framework incorporating Image Segmentation into Style Transfer.
- Evaluated our framework based on CycleGAN and FastFCN and achieved fantastic results.

### WORK EXPERIENCE

**Topic: Quantitative Analysis for Stock Prediction**

*Oct. 2020 ~ present*

**Company: Zhejiang Yingyang Asset Management**

- Using multi-frequency LSTM to extract the market information and further made a portfolio for stock.
- Using deep reinforcement learning to made a uncertain time portfolio for stock.
- The Earning ratio of portfolio in 2021 March is **11%** in a two-day portfolio account.

### AWARDS AND HONORS

- Provincial **Third prize** (Top at most 10%) in College Mathematics Competition, Anhui Province, 2019.
- Sixth prize (**Top 0.006 in China**) in China Computer Federation Big Data and Computing Intelligence Contest, 2020.
- Outstanding Student Scholarship Award **First Prize** (Funding of CNY 5,000).

### TECHNICAL STRENGTHS

**English Fluency:** TOEFL iBT 104 (Reading: 29, Listening: 29, **Speaking: 24**, Writing: 22.)

**Computer Skills:** Assembly Language, C, C++, MATLAB, R, Mathematica, JavaScript, Python.