Wenjie Yang

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Clear Water Bay, Kowloon, Hong Kong

Research Interests

Computational Social Science, Natural Language Processing, Social Media, Text Mining, Crisis informatics

Education

Hong Kong University of Science and Technology (HKUST), Hong Kong 2020 - 2022
M.Phil. in Computer Science and Engineering
GPA: 3.78/4.3; Advisor: Xiaojuan Ma

Beijing Forestry University, Beijing, China 2015 - 2020
B.E. in Computer Science and Technology
GPA: 3.87/4.0

Publications and Manuscripts

Conference Papers

[c.3] **W. Yang**, S. Wang, Z. Peng, C. Shi, X. Ma, D. Yang. Know it to Defeat it: Exploring Health Rumor Characteristics and Debunking Efforts on Chinese Social Media during COVID-19 Crisis. *AAAI International Conference on Web and Social Media.* (**ICWSM 2022**). [∼20.0% Acceptance Rate]

[c.2] Z. Sun, S. Wang, **W. Yang**, Y. Onur, C. Shi, X. Ma. A Postcard from Your Food Journey: Self-Reflection on Social Food Posting. *ACM Designing Interactive Systems Conference.* (**DIS 2020**). [24.0% Acceptance Rate]

[c.1] **W. Yang**, G. Sun, X. Ding, X. Zhang. Budget-feasible User Recruitment in Mobile Crowdsensing with User Mobility Prediction. *IEEE International Performance Computing and Communications Conference.* (**IPCCC 2018**). [28.8% Acceptance Rate]

Manuscripts

[m.3] **W. Yang**, Z. Wu, N. Mok, X. Ma. Study on Crisis Informatics. In submission to **CHI 2022**.

[m.2] **W. Yang**, X. Ma, A. Halevy. Study on Knowledge Base Construction. In submission to **WWW 2022**.

[m.1] T. Kim, Q. Guo, H. Kim, **W. Yang**, M. Li, X. Ma. Study on User Interface Toolkit. In submission to **CSCW 2021** (Major Revision).

Research Experience

Knowledge Computation Lab, HKUST Sept 2021 - Present
Advised by Prof. Yangqiu Song

I am brainstorming research topics regarding prompt-based learning of pre-trained language models.

Human-Computer Interaction Lab, HKUST Sept 2020 - Present
Advised by Prof. Xiaojuan Ma, Prof. Diyi Yang (Georgia Tech), and Prof. Alon Halevy (Facebook AI)

Projects: Crisis Informatics, Natural Language Processing

- Studied the interaction between a vulnerable group and other members of an online community during COVID-19. Identified such conversations from a large post set (245 GB) utilizing BERT and applied mixed methods, such as thematic analysis and regression analysis, to determine their characteristics and provide insights into crisis management. [m.3]

- Proposed to measure and describe the correlation between human experiences using distributional similarity of words in text reviews. Created knowledge bases (KBs) for similar experiences and incorporated external knowledge to enhance the quality of these KBs. [m.2]
- Examined the spread of health rumors on Chinese social media (Sina Weibo) during the COVID-19 using visual and regression analyses, providing empirical evidence for the negativity bias theory in psychology. Demonstrated the short-term association between rumor propagation and debunking activities using quantitative methods such as the Granger causality test. [c.3]

Department of Computer Science and Technology, Peking University Sept 2019 - Aug 2020
Advised by Prof. Leye Wang and Prof. Natasha Zhang Foutz (UVa)

Projects: Computer Vision, Deep Learning

- Used Keras to fine-tune pre-trained CNNs (e.g., ResNet50) to classify 10K images of T-shirt designs across ten different tasks (e.g., sentiment and concreteness). Enhanced the models' performance using resampling, data augmentation, multi-tasked learning, and ensemble learning.
- Contributed to an open-source toolkit for Urban Computing, including developing spatial-temporal forecasting models (e.g., GeoMAN) through Tensorflow and writing documentation. [UCTB]

Human-Computer Interaction Lab, HKUST Jun 2019 - Sept 2019
Advised by Prof. Xiaojuan Ma

Projects: Visualization, Qualitative study, Prototyping

- Implemented a visualization pipeline. Extracted nutritional information and user emotions from food photos and text, and used Flask and JavaScript to generate customized landscape postcards to help users track their dietary intake. [c.2]
- Participated in interviews with eight dyads to understand the role of a text-messaging system in improving the experience of romantic conversations online. [m.1]
- Programed Kinect sensors to track users' voice and torso movements and used state machines written in C# to create virtual characters' responses.

Mobile Computing Lab, Beijing Forestry University Sept 2017 - May 2018
Advised by Prof. Guodong Sun

Projects: Mobile Crowedsourcing, Machine learning

- Examined the task allocation problem in crowdsourcing considering human mobility. Modeled user historical trajectory with LSTM and proposed a greedy algorithm to solve the optimization problem with a proven approximation factor. [c.1]

Teaching Experience

COMP1021 Introduction to Computer Science, HKUST Fall 2021
Teaching Assistant

Mentoring Experience

Zhiyang Wu, undergraduate researcher, HKUST Summer 2021

Nga Yiu Mok, undergraduate researcher, HKUST Summer 2021

References

Prof. Xiaojuan Ma
Associate Professor, Department of Computer Science and Engineering, HKUST
mxj@cse.ust.hk

Prof. Diyi Yang
Assistant Professor, School of Interactive Computing, Georgia Institute of Technology
diyi.yang@cc.gatech.edu

Prof. Alon Halevy
Director, Facebook AI
ayh@fb.com

Skills

Research: Statistical analysis, Interview, Survey, Literature review, Thematic analysis, Web crawling, Mturk

Computing: Python, Bash, Java, C; Pytorch, Transformers, Tensorflow, Pandas, Keras

Design & Prototyping:

- Frontend: HTML, CSS, JavaScript, Adobe Photoshop & Premiere
- Backend: Flask, SQL, Docker, ElasticSearch, AWS, Android

Languages: Mandarin, Cantonese, English (TOEFL 107; Speaking 25)