

# WEI HAN

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## 🎓 EDUCATION

### Singapore University of Technology and Design (SUTD)

Singapore

*Ph.D.* in Information Systems and Technology Design (ISTD)

Sep 2020 – Present

Advisor: Soujanya Poria

### The Hong Kong University of Science and Technology (HKUST)

Hong Kong SAR, China

*M.Phil.* in Electronic and Computer Engineering

Aug 2018 – Aug 2020

Advisor: Wei Zhang

### Zhejiang University (ZJU)

Zhejiang, China

*B.S.* in Electronics and Information Engineering, Chu Kochen Honors College

Aug 2014 – Jun 2018

GPA: 3.90/4.00, ranking top 2%

## 📖 PUBLICATIONS

- **Wei Han**, Hui Chen, Soujanya Poria, “Improving Multimodal Fusion with Hierarchical Mutual Information Maximization for Multimodal Sentiment Analysis”, *Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2021. [\[paper\]](#) [\[code\]](#)
- Yujie Lu, Yingxuan Huang, Shengyu Zhang, **Wei Han**, Hui Chen, Zhou Zhao, Fei Wu, “Multi-trends Enhanced Dynamic Micro-video Recommendation”, *arXiv preprint*.
- **Wei Han**, Hui Chen, Alexander Gelbukh, Amir Zadeh, Louis-philippe Morency, Soujanya Poria, “Bi-Bimodal Modality Fusion for Correlation-Controlled Multimodal Sentiment Analysis”, *ACM International Conference on Multimodal Interaction (ICMI)*, 2021. **Best Paper Nomination**. [\[paper\]](#) [\[code\]](#)
- Hui Chen, Pengfei Hong, **Wei Han**, Navonil Majumder, and Soujanya Poria. “Dialogue Relation Extraction with Document-level Heterogeneous Graph Attention Networks”, *arXiv preprint*. [\[paper\]](#) [\[code\]](#)

## 👥 PROJECTS

### Multimodal Sentiment Analysis

In SUTD

Brief introduction: Design effective multimodal fusion methods to improve the performance on sentiment analysis tasks

- Implement a bi-modal transformer-based and a mutual information guided model
- Achieve 1~3% improvement compared with SOTA

### Relation Extraction in Dialog

In HKUST

Brief introduction: Working on the relation extraction task on the first dialog-style dataset

- Design and Implement a GNN-based model to learn meaningful hidden representations for the relation extraction task
- Achieve 8% higher F1 score compared with the baseline given in the original paper

### Bayesian Optimization Based Network Pruning

In HKUST

Brief introduction: Design and finish an automatic flow that uses Bayesian optimization to prune a network in Tensorflow

- Integrate our methodology into PocketFlow open source library
- Tune the parameter and finally got 3-5% accuracy loss on Resnet for CIFAR10 dataset with pruning ratio of 50%

## ⚙️ SKILLS

- Programming Languages: Python > MATLAB == C++ > C > Verilog
- Deep Learning Framework: PyTorch > Tensorflow » Theano
- Software & Tools: Microsoft Office, Latex

## ♡ HONORS AND AWARDS

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<i>1<sup>st</sup> Class</i> Scholarship for Academic Achievements	2015, 2016
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<i>3<sup>rd</sup> Class</i> in the Chinese National College Student Mathematical Competition	2015
Provincial Government Scholarship of Zhejiang Province	2016
<i>3<sup>rd</sup> Class</i> in the Programming Contest in Zhejiang University	2016
<i>3<sup>rd</sup> Class</i> Scholarship for Outstanding Students	2017
Postgraduate Studentship in HKUST	2018 – 2020
SUTD Ph.D. Fellowship	2020 – Present