



# HANQING TAO (陶汉卿)

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I am a Ph.D. student at the School of Computer Science and Technology, University of Science and Technology of China (USTC). My supervisor is Prof. Enhong Chen. My research interests include Data Mining and Natural Language Processing (NLP), with an emphasis on Chinese.

## EDUCATION

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<b>M.S. &amp; Ph.D.</b>   <i>Computer Application Technology</i> University of Science and Technology of China (USTC)	September 2017 – Present Hefei, Anhui
<b>Bachelor of Science</b>   <i>Electrical Engineering and Automation</i> China University of Mining and Technology (CUMT)	September 2013 – June 2017 Xuzhou, Jiangsu

## WORK EXPERIENCE

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<b>Laboratory Assistant Researcher</b> University of Science and Technology of China (USTC) <ul style="list-style-type: none"><li>Focus: Data Mining, Artificial Intelligence, Chinese Language Analysis, Natural Language Processing</li></ul>	September 2019 – Present Hefei, Anhui
<b>Research Intern</b> Iflytek Corp. <ul style="list-style-type: none"><li>Project: Personalized Input Thesaurus Recommendation</li><li>Focus: Data Processing, Data Analysis, Statistical Analysis</li></ul>	June 2017 – September 2017 Hefei, Anhui

## PROJECTS AND RESEARCH

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<b>Teaching Text Classification Models Some Common Sense</b> Focus: Text Classification, Label Embedding, Statistical Learning, Deep Learning Enhancement.	Spring 2022
<b>Learning from Ideography and Labels</b> Focus: Chinese Text Classification, Ideography, Schema Theory, Label Embedding.	Summer 2021
<b>Ideography Leads Us to the Field of Cognition</b> Focus: Human Language Cognition, Chinese Language Analysis, Text Classification.	Summer 2020
<b>Chinese Embedding via Stroke and Glyph Information</b> Focus: Stroke and Glyph Modeling, Human Brain Imitation, Chinese Language Analysis.	Spring 2019
<b>A Radical-Aware Attention-Based Model for Chinese Text Classification</b> Focus: Radical Modeling, Chinese Language Analysis.	Summer 2018
<b>A Topic Understanding Model for Chinese Text Based on Rules and Naive Bayes</b> Focus: Topic Understanding, Naive Bayes, Hand-made Rules.	Spring 2017
<b>China Robotics Competition (RoboCup 2015)</b> Focus: Humanoid Combat Remote Control Robot.	Summer 2015

## PUBLICATIONS

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- Hanqing Tao**, Guanqi Zhu, Enhong Chen, Shiwei Tong, Kun Zhang, Tong Xu, Qi Liu, Yew-Soon Ong, "Learning from Ideography and Labels: A Schema-aware Radical-guided Associative Model for Chinese Text Classification," *IEEE Transactions on Knowledge and Data Engineering (IEEE TKDE)*, 2022. (CCF A) (Impact Factor: 9.196)
  - Hanqing Tao**, Shiwei Tong, Kun Zhang, Tong Xu, Qi Liu, Enhong Chen, Min Hou, "Ideography Leads Us to the Field of Cognition: A Radical-guided Associative Model for Chinese Text Classification," in *Proceedings of the 35th AAAI Conference on Artificial Intelligence (AAAI'21)*, Virtual Conference, USA, Feb. 2021: 13898-13906. (CCF A) (Acceptance Rate = 21%)

3. **Hanqing Tao**, Shiwei Tong, Hongke Zhao, Tong Xu, Binbin Jin, Qi Liu, "A Radical-aware Attention-based Model for Chinese Text Classification," in *Proceedings of the 33th AAAI Conference on Artificial Intelligence (AAAI'19)*, Honolulu, Hawaii, USA, Feb. 2019: 5125-5132. (CCF A) (Acceptance Rate = 16.2%)
4. **Hanqing Tao**, Guanqi Zhu, Tong Xu, Qi Liu, Enhong Chen, "Teaching Text Classification Models Some Common Sense via Q & A Statistics: A Light and Transplantable Approach," in *Proceedings of the 11th CCF International Conference on Natural Language Processing and Chinese Computing (NLPC'22)*, Guilin, Guangxi, China, Sep. 2022: 593-605. (CCF C) (Acceptance Rate = 27%)
5. **Hanqing Tao**, Shiwei Tong, Tong Xu, Qi Liu, Enhong Chen, "Chinese Embedding via Stroke and Glyph Information: A Dual-channel View," arXiv preprint arXiv:1906.04287, June 2019.
6. Sirui Zhao, **Hanqing Tao**, Yangsong Zhang, Tong Xu, Kun Zhang, Zhongkai Hao, Enhong Chen, "A two-stage 3D CNN based learning method for spontaneous micro-expression recognition," *Neurocomputing*, 448 (2021): 276-289.
7. Guanqi Zhu, **Hanqing Tao**, Han Wu, Liyi Chen, Ye Liu, Qi Liu, Enhong Chen, "Text Classification via Learning Semantic Dependency and Association," in *Proceedings of the International Joint Conference on Neural Networks (IJCNN'22)*, IEEE, 2022: 1-8.
8. Wei Cao, Kun Zhang, **Hanqing Tao**, Weidong He, Qi Liu, Enhong Chen, Jianhui Ma, "Exploiting Visual Context and Multi-grained Semantics for Social Text Emotion Recognition," in *CAAI International Conference on Artificial Intelligence*. Springer, Cham, 2021.
9. Wei Cao, Kun Zhang, Shulan Ruan, **Hanqing Tao**, Sirui Zhao, Hao Wang, Qi Liu, Enhong Chen, "Causal Narrative Comprehension: A New Perspective for Emotion Cause Extraction," *IEEE Transactions on Affective Computing (IEEE TAC)*, 2022.
10. Shulan Ruan, Kun Zhang, Yijun Wang, **Hanqing Tao**, Weidong He, Guangyi Lv, Enhong Chen, "Context-Awar Generation-Based Net For Multi-Label Visual Emotion Recognition," in *Proceedings of the IEEE International Conference on Multimedia and Expo (ICME'2020)*, London, UK, July 2020.
11. Jun Wang, Hefu Zhang, Qi Liu, Zhen Pan, **Hanqing Tao**, "Crowdfunding Dynamics Tracking: A Reinforcement Learning Approach," in *Proceedings of the 34th AAAI Conference on Artificial Intelligence (AAAI'20)*, New York, USA, Feb. 2020.
12. Zheng Gong, Shiwei Tong, Han Wu, Qi Liu, **Hanqing Tao**, Wei Huang, Runlong Yu, "Tipster: A Topic-Guided Language Model for Topic-Aware Text Segmentation", in *International Conference on Database Systems for Advanced Applications (DASFAA'22)*, pp. 213-221, Springer, Cham.
13. Ye Liu, Han Wu, Zhenya Huang, Hao Wang, Jianhui Ma, Qi Liu, Enhong Chen, **Hanqing Tao**, Ke Rui, "Technical Phrase Extraction for Patent Mining: A Multi-level Approach," in *Proceedings of the 20th IEEE International Conference on Data Mining (ICDM'2020)*, Sorrento, Italy, Nov. 2020.

## SKILLS & SELF-EVALUATION

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**Programming:** Python, pytorch for deep learning, sklearn for machine learning, pandas / numpy / matplotlib for data analysis, data process and data mining

**Languages:** Chinese (Native), English (CET-6 521), Japanese (N4, basic)

**Document Creation:** Microsoft Office Suite, Excel for data analysis, PPT making & presentation, Viso for picture & model drawing, LaTeX, Patent Writing

**Self-evaluation:** Love English paper writing, love using Python to achieve (semi-)automatic practical daily tasks, enjoy reading, listening, cooperating and sharing ideas, keen on data mining, data analysis and human language problem, have extensive hobbies, love creation and making innovations

## HONORS AND AWARDS

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**Outstanding Graduate Student Prize (中国科学技术大学优秀毕业生)** Apr. 2022  
Recognition for outstanding students of USTC.

**Yuan Qing Scholarship (元庆奖学金)** Dec. 2020  
Merit based grant for students pursuing scientific research.

<b>China National Scholarship (国家奖学金)</b> For outstanding scientific contributions.	Dec. 2019
<b>First Class Scholarship for Ph.D. Postgraduate students (中国科学技术大学一等学业奖学金)</b> For outstanding students.	2017-2022
<b>Outstanding Graduate Scholarship (中国矿业大学优秀毕业生)</b> For outstanding graduate students of CUMT.	June 2017
<b>Excellent student and first Class Scholarship (中国矿业大学校级优秀学生与一等奖学金)</b> For outstanding undergraduate students.	2014-2016
<b>The 1st Prize of Humanoid RoboCup International Open Competition (机器人大赛一等奖)</b> For outstanding competitors.	July, 2015
<b>Hongyi Electric Scholarship (弘毅电气奖学金)</b> For outstanding undergraduate students.	Nov. 2014

## PATENTS

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1. Enhong Chen, Qi Liu, Hanqing Tao, Shiwei Tong, Tong Xu, 一种基于部首联想的汉语文本分类方法及装置, Patent Number: No.202011437069.2 (学生一作)
2. Enhong Chen, Qi Liu, Ruijun Sun, Yanmin Chen, Hanqing Tao, 基于文章的问题生成方法, Patent Number: No.202010350734.8
3. Enhong Chen, Qi Liu, Tong Xu, Shiwei Tong, Hanqing Tao, 基于笔画和字形的形态学双通道中文词嵌入方法, Patent Number: No.201910881062.0 (学生二作)
4. Enhong Chen, Qi Liu, Tong Xu, Hanqing Tao, Shiwei Tong, Hongke Zhao, Binbin Jin, 一种中文文本的分类方法及系统, Patent Number: No.201811371967.5 (学生一作, 已授权)
5. Enhong Chen, Qi Liu, Hongke Zhao, Binbin Jin, Hanqing Tao, 面向众筹平台的捐赠行为与捐赠者保持预测方法, Patent Number: No.201810561618.3