Chaofan Tao

2006, Xiyuan Ave., WestHi-Tech Zone, Chengdu, Sichuan, P.R.China, 611731
tcftrees@gmail.com (+86) 189-8194-1794 Homepage ChaofanTao

"Let us solve problems larger than ourselves!"

Research Interests

Deep Learning | Transfer Learning | Computer Vision | Unsupervised Learning | Applications

Education

University of Electronic Science and Technology of China (UESTC) **Chengdu, P.R.China**
Mathematics and Physics Basic Science (Experimental Class, Honors College) *Sept 2016 - Present*

GPA: 3.98/4.00 Avg. score: 90.31/100 Core course grades (as follows)
Mathematics: probability and statistics:94, stochastic processes:95, linear algebra:89, advanced algebra and geometry:90, calculus i:89, advanced calculus ii:91, advanced calculus iii:95, functions of complex variables: 91, mathmatical modeling:90.
Computer Science: data structure:92, algorithm analysis and design:90, database fundamental:90, foundations of circuits and electronics illustrated:89, basic academic training i:98 , advanced programming (C languages):86, engineering practice innovation project:98.
Physics: quantum machanics:99, theoretical machanics:98, electrodynamical mechanics:90, thermodynamics and statistic physics:97, atomic physics:92.

Skills

Programming: C, C++, Python, Matlab, SQL, Shell
Languages: Chinese (native), English IELTS: 7.5 (R:8.5 L:8.5 W:6.5 S:6.0)
Tools: Mathcad, Multisim, Jupyter, SPSS, Latex

Research Experience

Learning Categorical-Invariant Features for Domain Adaptation **Chengdu, P.R.China**
Research Assistant with Prof. Lixin Duan, at Data Intelligence Group *Nov. 2018 - Mar. 2019*

- Proposed a novel method for unsupervised domain adaptation by injecting target categorical knowledge directly into the model in an adversarial fashion.
- Provided theoretical insights about why the proposed model enables fine-grained domain invariance within each category based on the relations between decision boundaries of classifiers and objective functions.
- Implemented all the experiments in the proposed method and obtained improved performance against state-of-the-art transfer learning methods.

Exploiting Mutual Relation for Visual Relationship Detection **Chengdu, P.R.China**
Research Assistant with Prof. Yang Yang, at Center for Future Media *Feb. 2018 - Oct. 2018*

- Co-proposed an intuitive algorithm for visual relationship detection by exploiting mutual relation in a siamese network and incorporating semantic information in the model .
- Formulated objective functions and conducted part of experiments (preprocessing, object detection et al).
- Visualized our comparable results and writed part of the paper.

Multi-Clue based Representation Learning for Doctors Clustering **Chengdu, P.R.China**
Research Assistant with Prof. Yang Yang, at Center for Future Media *Sept. 2017 - Jan. 2018*

- Proposed a method to mitigate the problem of data sparsity for doctors clustering by utilizing various types of clue (e.g. rating number and comment text) .
- Crawled various types of data and built an auto-encoder for discriminative representation learning.

Publications

- **Chaofan Tao**, Fengmao Lv, Lixin Duan and Min Wu. "Minimax Entropy Network: Learning Categorical-Invariant Features for Domain Adaptation" (under review), IJCAI-19 (CCF A tier).
- Yi Bin, **Chaofan Tao**, Yang Yang, Zi Huang, Jingjing Li and Heng Tao Shen. "MR-NET: Exploiting Mutual Relation for Visual Relationship Detection" , AAAI-19 (CCF A tier).

Awards and Honors

- Outstanding Student Scholarship, Year 2018
- 2nd Prize in Mathematical Contest and Interdisciplinary Contest in Modeling, Year 2018
- Recommendation Letter of Management Programme, National University of Singapore, Year 2018
- Outstanding Student Scholarship, Year 2017
- Prize for finishing National University Student Marathon League, Year 2017
- 2nd Prize in the Undergraduate Physics Knowledge Competition in Sichuan Province, Year 2017

Extracurricular Activities

- Assistant of the director of student affairs office, Yingcai Honors College
- Commissioner of student administration committee, Yingcai Honors College
- Debater of Debate Team, College of Life and Science and Technology
- Player of Basketball Team, Yingcai Honors College