Chaofan Tao

Hong Kong

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"Let us solve problems larger than ourselves!"

Education

University of Hong Kong
Doctor of Philosophy in Electrical and Electronic Engineering *Sept 2020 - Present*
Supervised by Dr. Ngai Wong and Dr. Ping Luo.

University of Electronic Science and Technology of China **985, 211, Double First Class**
Bachelor of Mathematics and Physics Basic Science *Sept 2016 - Jul. 2020*
Experimental Class, Yingcai Honors College (Elite College of **2%** students)
GPA: 3.98/4.00 Avg. score: 90.51/100
Interdisciplinary background in Mathematics, Computer Science and Physics.

Honours and Awards

- Outstanding graduation thesis, Year 2020
- Huawei Scholarship, Year 2019
- Outstanding Student Scholarship, top 10% in the Elite College, Year 2018
- 2nd Prize in Mathematical Contest and Interdisciplinary Contest in Modeling, top 20%, Year 2018
- Outstanding Student Scholarship, top 10% in the Elite College, Year 2017

Publications

- **Chaofan Tao**, Qinhong Jiang, Lixin Duan, Ping Luo. "Dynamic and Static Context-aware LSTM for Multi-agent Motion Prediction". ECCV 2020 (acceptance rate: 27%).
- **Chaofan Tao**, Fengmao Lv, Lixin Duan and Min Wu. "Minimax Entropy Network: Learning Categorical-Invariant Features for Domain Adaptation", arXiv:1904.09601v2, 2019 (pre-print).
- Yi Bin, Yang Yang, **Chaofan Tao**, Zi Huang, Jingjing Li and Heng Tao Shen. "MR-NET: Exploiting Mutual Relation for Visual Relationship Detection", AAAI 2019 (acceptance rate: 16.2%).

Research Experience

Vehicle Intention Prediction with Social Modeling **Shanghai, P.R.China**
Research Intern with Qinhong Jiang, at SenseTime *Aug. 2019 - Jan. 2020*
- Study on the image-level and video-level vehicle intention prediction for self-driving cars.
- Take the social model (e.g. socialGAN) into consideration to explicitly model the intention prediction further.

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 adversarially injecting target categorical knowledge into the model in a teacher-student setting.
- The proposed model enjoys a concise framework and a clear training procedure, which is effective and efficient.
- 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 (pre-processing, object detection et al).
- Visualized our comparable results and wrote part of the paper.

Skills and English Test

Programming: C++, Python, Java (basic), Matlab, SQL
English: IELTS: 7.5 (R:8.5 L:8.5 W:6.5 S:6.0), GRE: 321 + 3

Main Courses

Mathematics: probability and statistics, stochastic processes, linear algebra, advanced algebra and geometry, advanced calculus i, ii, iii, abstract algebra, combinatorial mathematics, discrete mathematics, functions of complex variables, computational methods, mathematical modeling.
Computer Science: data structure, algorithm analysis and design, database fundamental, Advanced Programming, Operating System, foundations of circuits and electronics illustrated, basic academic training, engineering practice innovation project.
Physics: quantum mechanics, theoretical machanics, electrodynamical mechanics, thermodynamics and statistic physics, atomic physics, university physics i, ii, physical innovation project.