

Haoyu Wang

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Education

- 2019–Present **University of Pennsylvania, PA.**
Master of Science in Engineering in Computer and Information Science
Advisor: Dan Roth
- 2015-2019 **Shanghai Jiao Tong University (SJTU), Shanghai, China.**
Bachelor of Engineering in Information Engineering
Advisor: Lingge Jiang, Cewu Lu
- 2016 **University of Washington, WA.**
Exchange student

Research Interests

- NLP Event and Process, Commonsense Reasoning, Knowledge Graph
CV Human Pose Tracking, Object Pose Estimation

Publications

- Peer-reviewed [1] **Haoyu Wang**, Muhao Chen, Hongming Zhang, and Dan Roth. “Joint Constrained Learning for Event-event Relation Extraction”, EMNLP 2020.
- [2] Hongming Zhang, Muhao Chen, **Haoyu Wang**, and Dan Roth. “Analogous Process Structure Induction for Sub-event Sequence Prediction”, EMNLP 2020.
- [3] Muhao Chen, Hongming Zhang, **Haoyu Wang**, and Dan Roth. “What Are You Trying to Do? Semantic Typing of Event Processes”, CoNLL 2020.
- [4] **Haoyu Wang**, Vivek Kulkarni, and William Yang Wang. “DOLORES: Deep Contextualized Knowledge Graph Embeddings”, AKBC 2020.
- [5] Yuliang Xiu, Jiefeng Li, **Haoyu Wang**, Yinghong Fang, and Cewu Lu. “Pose Flow: Efficient Online Pose Tracking”, BMVC 2018.
- Others [6] Hongming Zhang, **Haoyu Wang**, and Dan Roth. “Unsupervised Label-Aware Event Trigger and Argument Classification”, AAAI 2021, under review.
- [7] Zelin Zhao, **Haoyu Wang**, Gao Peng, Haoshu Fang, Chengkun Li, and Cewu Lu. “Estimating 6D Pose From Localizing Designated Surface Keypoints”, arXiv 2018.

Research Experiences

- Sep 2019– **Research Assistant in Cognitive Computation Group, UPenn.**
Present Advisor: **Dan Roth**, E. D. Glandt Distinguished Professor, Dept. of Computer and Information Science
Project: Event and Process
- Unsupervised event extraction with SRL, mention detector, and label-aware clustering
 - Concatenating side information to original context for event-event relation extraction
 - A joint constrained learning framework for event temporal, subevent, and coreferential relation extraction
 - Subevent sequence prediction using analogous process structures
 - A framework for inferring what action an event process tends to take and what kind of object(s) it seeks to affect

- Jul 2018– **Research Assistant in Natural Language Processing Group, UCSB.**
 Sep 2018 Advisor: **William Yang Wang**, Assistant Professor, Dept. of Computer Science
 Project: Representation Learning of Knowledge Graphs
 - New knowledge graph embedding algorithm that captures contextual cues and dependencies among entities and relations
- Nov 2017– **Research Assistant in Machine Vision and Intelligence Group, SJTU.**
 Dec 2018 Advisor: **Cewu Lu**, Research Professor, Dept. of Computer Science and Engineering
 Project: Pose Estimation and Tracking
 - New method for multi-person pose tracking with spatio-temporal information
 - Novel architecture of detecting 3D model instance and estimating 6D pose under heavy occlusion
- Mar 2016– **Research Assistant in National Laboratory for Information Content Analysis, SJTU.**
 June 2018 Advisor: **Shenghong Li**, Professor, School of Cyber Security
 Project: Information Leak Detection with Deep Neural Models

Honors and Awards

- Jul 2019 Graduated with Highest Honors, SJTU
 Oct 2018 SCSK Scholarship (Top 3%), SJTU
 Oct 2017 HUAWEI Scholarship (Top 3%), SJTU
 May 2017 Honorable Mention in Mathematical Contest in Modeling (MCM)
 Apr 2016 First Prize in Unmanned Aerial Vehicle (UAV) Competition (30 teams), SJTU
 2016-2019 Academic Excellence Scholarship (All Semesters), SJTU

Courseworks

- UPenn Reasoning for Natural Language Understanding, Language and Vision, Applied Machine Learning, (selected) Analysis of Algorithms, Theory of Computation, Sub-Linear Algorithms in Learning and Testing, Database and Information Systems.
- SJTU Big Data Mining (97), Machine Learning (92), Data Structure, Hardware Description Language (selected) and System Simulation (95), Information Theory, Principle of Communications (94), Electronic Circuits (95), Signals and Systems, Electromagnetic Field (94), Probability and Statistics, Digital Signal Processing, Wireless Networking Technology.

Tests

- TOEFL Reading: 29, Listening: 30, Speaking 22, Writing 27 (Total: 108, Test Date: Nov 2018)
 GRE Verbal 154, Quantitative 169, AW 3.5 (Test Date: Sep 2017)

Skills

- Programming Python, C/C++, Matlab, Java
 Framework PyTorch, Tensorflow
 Language Mandarin, English, Korean