Junheng Hao

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Education

University of California, Los Angeles — **Los Angeles, USA**
Ph.D. Candidate, Department of Computer Science — *Sept. 2017 - Present*
Advisors: Yizhou Sun, Wei Wang

Tsinghua University — **Beijing, China**
Bachelor of Engineering, School of Information Science and Technology — *Aug. 2013 - July. 2017*

Research Interests

Knowledge Graph, Graph/Text Mining, Natural Language Processing, Machine Learning

Research Experiences

Diversified Complementary Recommendation | Applied Scientist Intern — **Seattle, WA**
Lab: Amazon Product Graph Team | **Mentors:** Tong Zhao, Luna Dong, Christos Faloutsos — *June 2019 - Dec. 2019*
- Enabling diversified complementary recommendation from large-scale product graphs and hierarchical ontology.

Knowledge Transfer on Enterprise Blueprint Graph | Research Intern — **Princeton, NJ**
Lab: NEC Lab America, Inc. | **Mentors:** Lu-An Tang, Zhichun Li, Haifeng Chen — *June 2018 - Sept. 2018*
- Major project: Multi-source Graph Knowledge Transfer on ASI Enterprise Engine.
- Minor project: Deep-learning based End-point DNS Monitoring System for Malicious Process Detection.

Multi-view & Multi-lingual KG Representation Learning | Reseasrch Assistant — **Los Angeles, CA**
Lab: Scalable Analytics Institute (ScAi) — *Sept. 2017 - Present*
- Joint embedding model (JOIE) of the instance-ontology view in knowledge graphs for knowledge completion
- Ongoing projects: Semantic search on multi-lingual KGs, Imputation on gene ontology and protein graphs.

DynaMIT2.0: Mobility in Future | Research Intern — **Singapore City, Singapore**
Advisors: Moshe Ben-Akiva (MIT), Ravi Seshadri (SMART Lab) — *Aug. 2016 - Sept. 2016*
Lab: Future Mobility Computing Lab, Singapore-MIT Alliance for Research and Technology
- Improvement online state-update algorithms on status prediction model DynaMIT2.0 in transportation networks.

PhysioNet Challenge: Heart Sound Recordings Classification | Visiting Student — **Los Angeles, CA**
Mentor: Yan Liu (Melady Lab, University of Southern California) — *Jun. 2016 - Aug. 2016*
- PhysioNet Challenge (Phonocardiogram classification by revised-AlexNet on EEG spectrogram features).

Data-Driven Methods in Traffic Feature Analysis | Research Assistant — **Beijing, China**
Advisors: Zuo Zhang, Xin Pei (Tsinghua University) — *Sept. 2015 - May 2016*
- Using spatial/temporal information of traffic intersections to promote road network facility and avoid congestion.

Publications

[1] Jyun-Yu Jiang, Chelsea J.-T. Ju, **Junheng Hao**, Muhao Chen, Wei Wang. "JEDI: Circular RNA Prediction based on Junction Encoders and Deep Interaction among Splice Sites" submitted to ISMB 2020 (under review).

[2] Tong Zhao*, **Junheng Hao***, Luna Xin Dong, Christos Faloutsos, Jin Li, Yizhou Sun, Wei Wang. "Diversified Product Complementary Recommendation", submitted to KDD 2020 (under review).

[3] **Junheng Hao**, Muhao Chen, Wenchao Yu, Yizhou Sun, Wei Wang. "Universal Representation Learning of Knowledge Bases by Jointly Embedding Instances and Ontological Concepts", published on *ACM SIGKDD Conference on Knowledge Discovery and Data Mining* (KDD 2019)

[4] Chen-Shuo Sun, Xin Pei, **Junheng Hao**, Zuo Zhang. "Accident Impact Analysis in Traffic Safety and Mobility Using Group Network Features", published on *Transportation Research Part B: Methodological* (2018)

[5] Tanachat Nilanon, Jiayu Yao, **Junheng Hao**, Yan Liu. "Normal/Abnormal Heart Sound Recordings Classification Using Convolutional Neural Network", presented at *Computing in Cardiology 2016* (CinC 2016)

[6] Chen-Shuo Sun, **Junheng Hao**, Xin Pei, Zuo Zhang. "A Data Driven Approach for Evaluation of Urban Accident Impacts", presented at *IEEE Conference on Intelligent Transportation Systems* (ITSC 2016)

Academic Services

- PC member of ICML 2020 and SoCal NLP Symposium 2019
- PC member of 1st CDEC Workshop and 2nd CDEC Workshop, IEEE ICDM 2018/2019
- Reviewer: WDSM, ECML/PKDD, EMNLP, ICDM, TKDD etc.

Skills

- Programming Skills: Python, Java, C/C++, MATLAB, JavaScript, SQL
- Operating system & Tools: Linux(Ubuntu)/Mac OS X, Tensorflow, PyTorch, MXNet
- Language: Mandarin (Native), English (Proficient), German (Basic), Spanish (Basic)