Junheng Hao

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Education

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

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 & Work Experiences

Incorporating Ontologies in KG Representation Learning | Research Assistant   **Los Angeles, CA**
Lab: UCLA Data Mining Group, Scalable Analytics Institute (ScAi)   *Sept. 2017 - Present*
- Joint embedding model (JOIE) of the instance-ontology view in knowledge graphs for knowledge completion

Ontology Matching by Utilizing Graph Neural Networks | Applied Scientist Intern   **San Jose, CA**
Lab: IBM Research AI (Almaden) | **Mentors:** Chuan Lei, Berthold Reinwald, Fatma Ozcan   *June 2020 - Sep. 2020*
- Empowering GNNs for ontology matching between relational databases and standard healthcare ontologies

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 enterprise engines for malicious process detection.

PhysioNet Challenge: Heart Sound Recordings Classification | Visiting Scholar   **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 | Undergrad 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] **Junheng Hao**, Chuan Lei, Abdul Quamar, Vasilis Efthymiou, Fatma Ozcan. "OntoGNN: Hybrid Graph Neural Networks for Medical Ontology Matching", submitted to AAAI 2021 (under review)

[2] **Junheng Hao**, Tong Zhao, Jin Li, Luna Xin Dong, Christos Faloutsos, Yizhou Sun, Wei Wang. "P-Companion: Framework for Diversified Complementary Product Recommendation", accepted by ACM CIKM 2020 (Applied Research Track).

[3] 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 ECCB 2020 (under review).

[4] **Junheng Hao**, Chelsea J.-T. Ju, Muhao Chen, Yizhou Sun, Carlo Zaniolo, Wei Wang. "Bio-JOIE: Joint Representation Learning of Biological Knowledge Bases", accepted by ACM BCB 2020.

[5] **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 2019.

[6] 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)

[7] 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)

[8] 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 ICLR 2021 AAAI 2021, KDD 2020, ICML 2020, ECML-PKDD 2020 and AACL-IJCNLP 2020
- Journal/Conference Reviewer: TIST, TPAMI, TKDD, WDSM, ECML/PKDD, EMNLP, ICDM etc.

Skills

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