# Junheng Hao

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## Education

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

- Major of Field: Information and Data Management, Minors: Artificial Intelligence, Statistics | GPA: 3.85/4.00

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

- Overall GPA: 89.2/100 (3.8/4.0), Rank: 13/148 (Top 10%)
- Outstanding graduate in Department of Automation, Tsinghua University

## Research Interests

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

## Research Experiences

**Knowledge Transfer on Enterprise Blueprint Graph** | Research Intern — **Princeton, NJ**
**Advisor:** Lu-An Tang, Zhichun Li, Haifeng Chen — *June 2018 - Present*

- 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 Knowledge Graph Representation Learning** | GSR — **Los Angeles, CA**
**Lab:** Scalable Analytics Institute (ScAi) — *Sept. 2017 - Present*

- Formulated general KG into instance view and ontology view, proposed JOIE model to jointly learning embeddings for concepts and entities and achieved state-of-the-art performance on link completion and entity typing
- Ongoing project: Semantic search on multi-lingual KG (NLP), Imputation on Gene Ontology (Bioinfomatics), etc.

**DynaMIT2.0** | Research Intern — **Singapore**
**Advisor:** Moshe Ben-Akiva (MIT), Ravi Seshadri (SMART Lab) — *Aug. 2016 - Sept. 2016*
**Lab:** Future Mobility Computing Lab, Singapore-MIT Alliance for Research and Technology

- Implemented improvement on original transportation prediction model DynaMIT2.0 in both efficient method in structured traffic data and on-line state-update computing process by accelerated FD-EKF algorithm
- Utilized Grid Engine High Performance Clusters to parallelize DynaMIT2.0 algorithms in Singapore traffic study

**PhysioNet Challenge: Heart Sound Recordings Classification** | Visiting Student — **Los Angeles, CA**
**Mentor:** Yan Liu (Melady Lab, University of Southern California) — *Jun. 2016 - Aug. 2016*

- Participated in PhysioNet Challenge aiming to automatically label abnormal phonocardiogram (time series)
- Implemented clustering, SVM, logistic regression and revised-AlexNet with spectrogram features, current F1-score of 0.813 (Rank top 10 in competition)

**Data-Driven Methods in Traffic Feature Analysis** | Research Assistant — **Beijing, China**
**Advisor:** Zuo Zhang, Xin Pei (Tsinghua) — *Sept. 2015 - May 2016*

- Researched on transportation networks by using spatial and temporal data and applying web-indexing measurements (centrality/page rank) and specified key intersection to promote network facility and avoid congestion

## Publications

[1] 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)*

[2] 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)

[3] 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 CDEC Workshop, IEEE ICDM 2018
- ScAi Machine Learning Seminar: Introduction to GAN (Nov. 2017) [Slides]

## Skills

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