SIJIE HE

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OBJECTIVE

Ph.D. student seeking a **summer internship** where I apply my knowledge on ***spatial temporal data analysis, causal learning, and high dimensional statistics*** on real-world application.

EDUCATION

Ph.D. of Computer Science and Engineering Aug. 2016 - Present
University of Minnesota, GPA: 4.00/4.00 Minneapolis, Minnesota
Advisor: Prof. Arindam Banerjee

Master of Electrical Engineering (Excellent Graduate) Aug. 2014 - Jun. 2016
Harbin Institute of Technology (Member of C9 League) Harbin, China
GPA: 3.84/4.00, Rank: 1/130
Thesis: Flight modes recognition and tracking based on unmanned aerial vehicle telemetry data.

Bachelor of Electrical Engineering (Excellent Graduate) Aug. 2010 - Jun. 2014
Harbin Institute of Technology, GPA: 3.91/4.00, Rank: 3/125 Harbin, China
Thesis: Fault diagnosis method based on condition monitoring data.

WORK EXPERIENCE

General Electric Global Research Center June 2019 - August 2019
Research Intern - Machine Learning San Ramon, California
Mentor: Dr. Hao Huang

PUBLICATIONS

Sijie He and Hao Huang. Causal analysis of anomaly in multivariate and nonlinear time series. *AAAI Conference on Artifical Intelligence*, 2020 (Under review).

Sijie He, Xinyan Li, Vidyashankar Sivakumar, and Arindam Banerjee. Interpretable predictive modeling for climate variables with weighted lasso. *AAAI Conference on Artifical Intelligence*, 2019 (Acceptance rate: 16.2%, selected for oral presentation).

Sijie He, Xinyan Li, Vidyashankar Sivakumar, and Arindam Banerjee. Land climate prediction using sea surface temperatures. In *Proceedings of the 7th International Workshop on Climate Informatics*. Springer, 2018 (Spotlight presentation, acceptance rate: 7/45).

Jamal Golmohammadi, Imme Ebert-Uphoff, *Sijie He*, Yi Deng, and Arindam Banerjee. High-dimensional dependency structure learning for physical processes. In *2017 IEEE International Conference on Data Mining (ICDM)*, pages 883–888, 2017 (Acceptance rate: 19.9%).

Sijie He, Datong Liu, and Yu Peng. Flight mode recognition method of the unmanned aerial vehicle based on telemetric data. *Chinese Journal of Scientific Instrument*, 37(9):2004–2013, 2016 (2016 Best paper award, acceptance rate: 10%).

Sijie He, Yu Peng, and Dationg Liu. Fault diagnosis for discrete monitoring data based on fusion algorithm. In *12th IEEE International Conference on Electronic Measurement & Instruments (ICEMI)*, pages 125–130, 2015 (Best presentation in PHM subsection).

SKILLS AND INTERESTS

Skills Programming languages: Python, R, C, C++, TensorFlow, CUDA, Matlab and Verilog HDL.
Interests Machine Learning, Data Mining, Structure Learning, and High Dimensional Statistics.

HONORS & AWARDS

Student Travel award, AAAI. Jan. 2019

Student Travel award, CI Workshop. Sep. 2018

Student Travel Award, ICDM. Nov. 2017

Quality Metrics Fellowship for Graduate Study, University of Minnesota. 2016 - 2017

2016 Best Paper award, Chinese Journal of Scientific Instrument. Aug. 2017

Best Graduate Thesis Award in Harbin Institute of Technology 2016. Jul. 2016

National Scholarship for Graduate Students in China. Nov. 2015

Best Oral Presentation Award, ICEMI 2015. Jul. 2015

Endress+Hauser SC China Scholarship. Oct. 2013

TEACHING EXPERIENCE

Teaching Assistant

CSCI 5304 Computational Aspects of Matrix Theory. Sept. 2018 - Dec. 2018
Prof. Yousef Saad. University of Minnesota

System Reliability Engineering and Technology. May. 2015 - Aug. 2015
Prof. Haitao Liao. Harbin Institute of Technology

RELEVANT COURSEWORK

Machine Learning, Data Mining, Artificial Intelligence, Convex Optimization, Applied Parallel Programming (CUDA), Database Management Systems, Digital Signal Processing, Design and Analysis of Algorithms, Advanced Sensing Systems, Stochastic Process.