Jinning Li

PhD in Computer Science, University of Illinois at Urbana-Champaign

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Education

University of Illinois at Urbana-Champaign Aug 2020 - Present
Ph.D. Student in Computer Science, Department of Computer Science, The Grainger College of Engineering. Advisor: Prof. Tarek Abdelzaher

Shanghai Jiao Tong University Sep 2015 - Jun 2019
B.S. in Computer Science (Zhiyuan Honors Degree), ACM Honors Class, Department of Computer Science. Advisors: Prof. Yong Yu and Prof. Xiaofeng Gao

Research Interests

Data Mining, Graph Mining, Social Networks, Computer Vision, Natural Language Processing, Autonomous Driving.

Publications

Scribble-to-Painting Transformation with Multi-Task GANs
Jinning Li, Yexiang Xue
In International Joint Conference on Artificial Intelligence (**IJCAI**) 2019

Senti2Pop: Sentiment-Aware Topic Popularity Prediction on Social Media
Jinning Li, Yirui Gao, Xiaofeng Gao, Yan Shi, Guihai Chen
In IEEE International Conference on Data Mining (**ICDM**) 2019

DancingLines: Depicting Cross-Platform Event Popularity
Tianxiang Gao, Weiming Bao, **Jinning Li**, X. Gao, B. Kong, Y. Tang, G. Chen, X. Li
In International Conference on Database and Expert Systems Applications (**DEXA**) 2018

ID Preserving Face Super-Resolution Generative Adversarial Networks
Jinning Li, Yichen Zhou, Jie Ding, Cen Chen, Xulei Yang
In IEEE Access 2020

Manuscripts

Unsupervised Belief Representation Learning with InfoVGAE
Jinning Li, Huajie Shao, Dachun Sun, R. Wang, Y. Yan, J. Li, S. Liu, H. Tong, T. Abdelzaher

Cross-Layer Dependency Inference on Multi-Layered Inter-Dependent Networks
Yuchen Yan, Qinghai Zhou, **Jinning Li**, Tarek Abdelzaher and Hanghang Tong

Cognitive Variational Auto-Encoders for Belief Time Series Prediction
Jinning Li, Jiashu He, Dachun Sun, Tarek Abdelzaher

Industry Experience

Pony.ai Inc. *Perception System for Autonomous Driving Vehicles*
Algorithm Engineer Jul 2019 - Aug 2020

- Fused Road Obstacle Classification
  Develop obstacle classification system to recognize cars, pedestrian, cyclists with camera and 3D point cloud, helping Autonomous Driving Cars recognize the environment.
- Trajectory Prediction
  Develop a real-time algorithm to predict the moving trajectory of obstacles.

YITU Tech Inc. *Face Recognition, Super Resolution*
Research Intern Feb - Jun 2019

- Improve Face Recognition with Super-Resolution Algorithm
  Develop a super-resolution algorithm to restore low-resolution facial images while preserving the identification, and therefore improve the face recognition task.

Research Experience

University of Illinois at Urbana-Champaign *Social Sensing, Data Mining, NLP*
Ph.D. Student Aug 2020 - Present

- Advisor: Prof. Tarek Abdelzaher

- Unsupervised Belief Representation Learning in Polarized Networks
  We develop an information-theoretical graph variational autoencoders to learn and disentangle the belief representation from heterogenous polarized social networks.
- Influence Campaign Awareness and SenseMaking (INCAS)
  Develop a system to detect social influence compaign and predict people's response with text/graph mining and NLP techniques, cooperating with teams from DARPA, Lockheed Martin, USC, and UIUC (Prof. Jiawei Han, Prof. Heng Ji, and Prof. Hanghang Tong).

Purdue University *Computer Vision, GANs*
Research Intern Sep - Dec 2018

- Advisor: Prof. Yexiang Xue
- Transform Scribbles to Oil Paintings with Multi-Task GANs
  We introduced Multi-Task Learning to the settings of Generative Adversarial Networks to address the sparsity problem when transforming scribbles into artistic oil paintings.

Cornell University *Counterfactual Machine Learning, Recommendation Systems*
Research Intern Jul - Aug 2018

- Advisor: Prof. Thorsten Joachims
- Ad Placement Challenge on Criteo Dataset
  We develop a joint method of Counterfactual Risk Minimization and MLE. Our score places **Rank 1** in NIPS 2017 Workshop: Criteo Ad Placement Challenge.

Advanced Network Lab, Shanghai Jiao Tong University *Data Mining for Social Networks*
Research Assistant Jul 2017 - Jun 2019

- Advisor: Prof. Xiaofeng Gao
- Cross-Platform Popularity Analysis
  Developed a scheme to quantify topic popularity and analyzed the mechanisms through which an event propagates among multiple social media.
- Sentiment-Aware Topic Popularity Prediction on Short Text based Social Media
  Developed a novel neural network to estimate public sentiment and integrated it with time series analysis to improve popularity prediction.

Honors and Awards

Zhiyuan International Research Scholarship *(First Prize)*. 2019
Han-Ying-Ju-Hua Scholarship. 2018
Academic Excellence Scholarship of SJTU *(First Prize)*. 2017, 2018
International Interdisciplinary Contest in Modeling *(Meritorious Winner)*. 2017
Zhiyuan Honorary Scholarship. 2016, 2017
International Mathematical Contest in Modeling *(Outstanding Winner)*. 2015
Dongrun-Yau International High School Science Award. 2015

Academic Services

Teaching Assistant at CS122: Programming
Teaching Assistant at CS307: Operating System
Reviewer for IJCAI, AAAI, WWW conferences

Programming Proficiencies

C, C++, Java, Python (TensorFlow, PyTorch, MXNet)
HTML & Javascript, Matlab, LaTeX,