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, Natural Language Processing, Social Networks, Computer Vision, Autonomous Driving.

Publications

NTULM: Enriching Social Media Text Representations with Non-Textual Units
Jinning Li*, Shubhanshu Mishra*, Ahmed El-Kishky, Sneha Mehta, Vivek Kulkarni
In W-NUT Workshop at *International Conference on Computational Linguistics* (**COLING**) 2022

Unsupervised Belief Representation Learning with InfoVGAE
Jinning Li, Huajie Shao, Dachun Sun, R. Wang, Y. Yan, J. Li, S. Liu, H. Tong, T. Abdelzaher
In *International ACM SIGIR Conference* (**SIGIR**) 2022

Dissecting Cross-Layer Dependency Inference on Multi-Layered Inter-Dependent Nets
Yuchen Yan, Qinghai Zhou, **Jinning Li**, Tarek Abdelzaher, and Hanghang Tong
In *International Conference on Information and Knowledge Management* (**CIKM**) 2022

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: An Analytical Scheme to Depict 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

Industry Experience

Twitter Inc. (Cortex) *Knowledge Graph, Natural Language Processing*
Research Intern May 2022 - Aug 2022

- Knowledge Enhanced Language Model
  Develop a large-scale knowledge embedding for non-textual units (mentions, hashtags, urls, media) and use it to enhance the tweet representation learning of language model.

Pony.ai Inc. *Perception System for Autonomous Driving Vehicles*
Machine Learning 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. Advisor: Prof. Tarek Abdelzaher Aug 2020 - Present

- 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.

Purdue University *Computer Vision, GANs*
Research Intern. Advisor: Prof. Yexiang Xue Sep - Dec 2018

- 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. Advisor: Prof. Thorsten Joachims Jul - Aug 2018

- 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. Advisor: Prof. Xiaofeng Gao Jul 2017 - Jun 2019

- 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
Program Committee at AAAI Conference

Programming Proficiencies

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