Jinning Li

University of Illinois at Urbana-Champaign

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Education

University of Illinois at Urbana-Champaign Fall 2020 - Present
Ph.D. in Computer Science, Computer Science, The Grainger College of Engineering

Shanghai Jiao Tong University Sep 2015 - Jun 2019
Bachelor of Engineering (Zhiyuan Honors Degree), Computer Science, ACM Honors Class

- Research Interests: Social Sensing, Data Mining, Computer Vision, NLP

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: 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*

Research Experience

Machine Learning Group, **Purdue University**
Visiting Undergraduate 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 of scribbles when transforming them into artistic oil paintings. (IJCAI 2019 Published)

Counterfactual Machine Learning Group, **Cornell University**
Visiting Undergraduate Research Intern Jul - Aug 2018

- Advisor: Prof. Thorsten Joachims
- **Improve Supervised Learning on Logged Bandit Feedbacks**
  Straightforward supervised learning often leads to large bias. We improved supervised methods by applying *inverse propensity weighting* to balance the bias-variance tradeoff.
- **A Hybrid Method of Counterfactual Risk Minimization and Supervised Learning**.
  Designed a hybrid loss function not only learns the feedback of logged action, but also minimizes counterfactual risk for all the candidates in a batch.
- **Ad Placement Challenge on Criteo Dataset**
  Implemented our methods to learn an ad placement policy. Our method achieved **Rank 1** in *NIPS 2017 Workshop: Criteo Ad Placement Challenge* (post-challenge).

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

- Advisor: Prof. Xiaofeng Gao
- **Cross-Platform Event Popularity Analysis**.
  Developed a scheme to quantify event popularity and analyzed the mechanisms through which an event propagates among multiple social media. (DEXA 2018 Published)

- **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. (ICDM 2019 Accepted)

Industry Experience

Automatic Driving Perception, Pony.ai Inc. *Algorithm Engineer* Jul 2019 - Aug 2020

- **Fused Road Obstacle Classification**.
  Develop obstacle classification system to recognize cars, pedestrian, cyclists, etc with videos and 3D point cloud, helping automatic driving car recognize the environment.
- **Trajectory Prediction**.
  Develop algorithm to predict the trajectory of one object with historical information.

Computer Vision Team, YITU Tech Inc. *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.

Highlighted Course Projects

DeepWave: Learning to Simulate Water Wave in Real-time
CS230 *Virtual Reality and Interactive 3D Graphics*, **96/100** Jun 2018
Developed a method to learn the physical law of water-wave propagation and simulate the scene in real-time utilizing deep learning and wave packet theory.

Convolutional BiMPM for Natural Language Inference
CS229 *Natural Language Processing*, **93/100** May 2018
Proposed a novel convolutional bilateral multi-perspective matching model for natural language inference task on SNLI dataset, improving the accuracy to 86.7%.

LineArtist: A Multi-style Sketch to Painting Synthesis Scheme
CS348 *Computer Vision*, **92/100** Dec 2017
Developd a scheme to synthesize beautiful paintings with only some semantic sketches, including three procedures: *Sketch Image Extraction*, *Details Synthesis*, and *Style Transfer*.

Compiler *Maple*
MS208 *Compiler Design and Implementation*, **Outperforms GCC -O1** May 2017
Designed and implemented a compiler from *Lexical Analysis* to *Register Allocation* with graph-coloring optimization, translating Mx* (a hybrid of C and Java) to x86 Assembly.

Honors and Awards

Zhiyuan Scholarship for Overseas Visiting Study *(First Prize)*. 2019
Han-Ying-Ju-Hua Scholarship. 2018
Academic Excellence Scholarship of SJTU *(First Prize)*. *(Top 5%)* 2017
International Interdisciplinary Contest in Modeling *(Meritorious Winner)*. *(Top 7%)* 2017
Zhiyuan Honorary Scholarship. 2016, 2017
International Mathematical Contest in Modeling *(Outstanding Winner)*. *(Top 1%)* 2015
Dongrun-Yau International High School Science Award. *(Top 1%)* 2015

Teaching Experience

Teaching Assistant at MS100: Operating System Spring 2018
Teaching Assistant at CS122: Programming Fall 2016

Programming Proficiencies

C/C++, Java, Python (TensorFlow, PyTorch, MXNet)
HTML & Javascript (D3.js), Matlab, LaTeX, Verilog HDL