Yuyan Wang

EDUCATION

Princeton University, Princeton, NJ *Sept. 2012 - June 2016*

- **Ph.D.** in Statistics, Department of Operations Research and Financial Engineering
- Thesis: Robust High-Dimensional Regression and Factor Models, GPA: 4.0/4.0

University of Science and Technology of China (USTC), Hefei, China *Sept. 2008 - July 2012*

- **B.S Honors** in Statistics, Special Class for the Gifted Young (4-year undergrad program for talented youths under 16 years old). GPA: 3.95/4.0 (94.53/100); Rank: 1/188
- Awards: Guo Moruo Scholarship (<1%, highest undergrad award) and National Scholarship (1%, twice)

RESEARCH INTERESTS

Topics: Machine Learning and Personalization, User Behavior Modeling and Understanding, Long-Term Value Optimization, Algorithmic Fairness

Methodologies: Deep Learning, Reinforcement Learning (RL), High-Dimensional Statistical Modeling, Causal Inference, Big Data Analytics

INDUSTRY EXPERIENCE

Google Brain, Mountain View, CA *Oct. 2019 - Present*

- **Senior Researcher** on Google Brain Reinforcement Learning Research & Engagement Team

Uber Technologies Inc., San Francisco, CA *Sept. 2016 - Sept. 2019*

- ***Senior Applied Scientist**: 02/2018 - 09/2019; **Applied Scientist II**: 09/2016 - 01/2018*
- **Tech Lead** on Uber Eats home feed ranking and recommendation

Microsoft Research, Redmond, WA *June 2015 - Aug. 2015*

- ***Research Intern*** at Internet Services & Research Center

Morgan Stanley, New York City, NY *June 2014 - Aug. 2014*

- Strategies & Modeling ***Summer Associate***

Chinese Academy of Sciences (CAS), Beijing, China *Feb. 2012 - June 2012*

- ***Research Intern*** at Academy of Mathematics and Systems Science

University of California, Los Angeles (UCLA), Los Angeles, China *July. 2011 - Sept. 2011*

- ***Cross-disciplinary Scholars** in Science and Technology (CSST) program*, winner of CSST Award (6/90)

SELECTED PUBLICATIONS & PATENTS

[1] Wang, Y., Sharma, M., Badam, S., Xu, C., Sun, Q., Richardson, L., Chung, L., Chi, E.H., Chen, M.. "Surrogate for Long-Term User Experience in Recommender Systems." Proceedings of the 28th ACM SIGKDD Conference on Knowledge Discovery & Data Mining **(KDD 2022, to appear)**.

[2] Wang, Y., Zhao, Z., Dai B., Fifty, C., Lin, D., Hong L., Li, W., Chi, E.H.. "Can Small Heads Help? Understanding and Improving Multi-Task Generalization." Proceedings of the ACM Web Conference 2022 (**WWW / theWebConf 2022**).

[3] Wang, J., Le, Y., Chang, B., **Wang, Y.**, Chi, E.H., Chen, M.. "Learning to Augment for Casual User Recommendation." Proceedings of the ACM Web Conference 2022 (**WWW / theWebConf 2022**).

[4] Wang, Y., Wang, X., Beutel, A., Prost, F., Chen, J., Chi, E. H.. "Understanding and Improving Fairness-Accuracy Trade-offs in Multi-Task Learning." Proceedings of the 27th ACM SIGKDD Conference on Knowledge Discovery & Data Mining **(KDD 2021)**.

[5] Chen, M., **Wang, Y.**, Xu C., Le, Y., Sharma, M., Richardson, L., Wu S., Chi, E.H.. "Values of User Exploration in Recommender Systems." Fifteenth ACM Conference on Recommender Systems **(Recsys 2021).**

[6] Chen, Z., **Wang, Y.**, Lin, D., Cheng, D.Z., Hong, L., Chi, E.H., Cui, C.. "Beyond Point Estimate: Inferring Ensemble Prediction Variation from Neuron Activation Strength in Recommender Systems." Proceedings of the 14th ACM International Conference on Web Search and Data Mining **(WSDM 2021).**

[7] Wang, Y., Zhang, X., Liu, I., Ning, Y., Peng, C. (2021). "Multi-layer Optimization for a Multi-sided Network Service." **U.S. Patent No. 11,127,066**. Washington, DC: U.S. Patent and Trademark Office.

[8] Zhang, X., Zhang, S., **Wang, Y.**, Gogate, M., Ning, Y., Peng, C., ..., Lee, C. (2021). "Optimizing Listing Efficiency and Efficacy for a Delivery Coordination System." **U.S. Patent No. 11,157,579**. Washington, DC: U.S. Patent and Trademark Office.

[9] Wang, Y., Ning, Y., Liu, I., Zhang, X. (2018). "Food Discovery with Uber Eats: Recommending for the Marketplace." **Uber Engineering Blog.**

[10] Li, Q., Cheng, G., Fan, J., **Wang, Y.** (2018). Embracing the Blessing of Dimensionality in Factor Models. Journal of the American Statistical Association 113.521 (2018): 380-389. (**JASA**).

[11] Lin, N., Jing, R., **Wang, Y.**, Yonekura E., Fan, J., Xue, L. (2017). A statistical investigation of the dependence of tropical cyclone intensity change on the surrounding environment. **Monthly Weather Review**, 145 (7), 2813-2831.

[12] Fan, J., Li, Q., **Wang, Y. (Alphabetical order)** (2017). Estimation of High-Dimensional Mean Regression in Absence of Symmetry and Light-tail Assumptions. Journal of the Royal Statistical Society: Series B (Statistical Methodology) 79.1 (2017): 247-265. (**JRSS-B**).

SKILLS

Programming skills: Python (proficient), R (proficient), Tensorflow, Hive, SQL, Spark, C/C++, Matlab, q/kdb+
Languages: Mandarin (native), English (fluent)