RUOHAN ZHAN

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EDUCATION

Stanford University **Stanford, CA**

Ph.D. Candidate in Computational & Mathematical Engineering - Advisor: Susan Athey 09/2017 - (Expected) 06/2021

M.S. Candidate in Statistics 03/2020 - (Expected) 12/2020

- *Fellowships:* TOTAL Innovation Fellowship, D. E. Shaw Exploration Fellowship, PayPal Innovation Fellowship
- *Research Interests:* Causal Inference, Machine Learning, Statistics, Reinforcement Learning, Market Design

Peking University **Beijing**

B.S., Mathematics - GPA: 3.86/4.00; Ranking: 1/45 09/2013 - 07/2017

PUBLICATIONS AND WORKING PAPERS

- R. Zhan, K. Christakopoulou, E. Le, J. Ooi, M. Mladenov, A. Beutel, C. Boutilier, E. Chi, M. Chen. Towards Content Provider Aware Recommender Systems: A Simulation Study on the Interplay between User and Provider Utilities. 2020+.
- R. Zhan, V. Hadad, D. A. Hirshberg, S. Athey. Retrospective Inference for Stochastic Contextual Bandits. 2020+.
- V. Hadad, D. A. Hirshberg, R. Zhan, S. Wager, S. Athey. Confidence Intervals for Policy Evaluation in Adaptive Experiments. Minor Revision at PNAS.
- X. Luo, R. Zhan, H. Chang, F. Yang, P. Milanfar. Distortion Agnostic Deep Watermarking. CVPR 2020.
- R. Zhan, B. Dong. CT Image Reconstruction by Spatial-Radon Domain Data-Driven Tight Frame Regularization. SIAM Journal on Imaging Sciences, 9(3), 1063-1083, 2016.
- B. Yuan, S. R. Chitturi, G. Iyer, N. Li, X. Xu, R. Zhan, R. Llerena, J.T. Yen, A. L. Bertozzi. Machine Learning for Cardiac Ultrasound Time Series Data. SPIE Medical Imaging 2017.

WORK EXPERIENCE

Google Brain **Mountain View, CA**

Research Intern in Applied Reinforcement Learning 06/2020 - 09/2020

- Built a recommender agent that maximizes both users and creators utilities in an ecosystem by invoking counterfactual reasoning and reinforcement learning
- Implemented an ecosystem gym environment with multiple interacting intelligent agents
- Currently preparing a paper for submission

Google Research **Mountain View, CA**

Research Intern in Computational Vision 06/2019 - 09/2019

- Developed a deep generative framework for watermarking, using adversarial learning and channel coding
- Resulted in a patent and a paper accepted by CVPR 2020
- Part of the work is currently being launched into production

Cubist Systematic Strategies **New York, NY**

Summer Analyst in Equity Trading 06/2018 - 09/2018

- Identified and combined signals in large amounts of equity-based data, which added positive values to the group trading system
- Built a C++ interface of developed model for production

SKILLS & INTERESTS

- **Technical:** Python, R, C++, MATLAB, HTML, GitHub, LINUX
- **Languages:** English, Mandarin, Cantonese
- **Mentorship:** Stanford Women in Math Mentoring; Stanford Future Advancers of Science and Technology
- **Prize :** First Prize of 2018 Citadel Datathon at Stanford (Citadel Spotlight)