Ruohan Zhan

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EDUCATION

Stanford University *09/2017 - 2021(expected)*
Ph.D. in Computational and Mathematical Engineering - GPA: 4.12/4.00

Research Interests: apply learning algorithms to build machine intelligence, especially in reinforcement learning and control.

Courses: Deep Generative Models, Decision Making Under Uncertainty, Probabilistic Graphical Models, Introduction to Robotics, Artificial Intelligence, Natural Language Processing with Deep Learning, Optimization

Peking University *09/2013 - 07/2017*
B.S. in Computational Mathematics - GPA: 3.86/4.00

RESEARCH EXPERIENCE

Safe Reinforcement Learning (submitted) *10/2018-01/2019*
advised by Prof. Mykel Kochenderfer, Stanford University

- Design a safety-enhanced, scalable, model-free RL algorithm for MDPs in both learning and deployment processes.

GAN-Constructed Knockoffs *09/2018-12/2018*
CS236, Deep Generative Models, Stanford University, teamed with Ruilin Li

- Used Autoregressive Flow and Generative Adversarial Networks to construct Knockoffs for data under arbitrary distribution, with the exchangeability constraint satisfied
- Applied generated Knockoffs to variable selection for causal inference

Machine Comprehension on SQuAD using Bi-Directional Attention Flow *01/2018-03/2018*
CS 224N, Natural Language Processing with Deep Learning, Stanford University, teamed with Daisy Ding

- Applied Recurrent Neural Networks with Bi-Directional Attention Flow to train a model for the machine comprehension task on the Stanford Question Answering Dataset (SQuAD)
- Achieved competitive results of 75.594% F1 score and 65.299% EM on the test data set

PROFESSIONAL EXPERIENCE

Cubist Systematic Strategies, LLC, New York *06/2018-09/2018*
Summer Research Analyst, Equities Trading

- Developed advanced machine learning algorithms and methodologies to analyze large amount of equity-based data
- Alpha seeking and alpha combination, added positive value to the algorithmic trading system of the group
- Built a C++ model interface for production

PUBLICATION

- **Ruohan Zhan**, Bin Dong. *CT Image Reconstruction by Spatial-Radon Domain Data-Driven Tight Frame Regularization*, SIAM Journal on Imaging Sciences, 9(3), 1063-1083, 2016.
- Baichuan Yuan, Sathya R. Chitturi, Geoffrey Iyer, Nuoyu Li, Xiaochuan Xu, **Ruohan Zhan**, Rafael Llerena, Jesse T. Yen, Andrea L. Bertozzi. *Machine Learning for Cardiac Ultrasound Time Series Data*, SPIE Medical Imaging 2017.

SELECTED HONORS

- First Prize of 2018 Citadel Datathon at Stanford *10/2018*
- TOTAL Innovation Fellowship, Stanford *08/2018*

COMPUTATIONAL SKILLS

Python, C++, Julia, MATLAB, HTML, Bloomberg Terminal