# Yadong Lu

CONTACT 2243 Donald Bren Hall Phone: (518)334-4626 INFORMATION University of California, Irvine E-mail: yadongl1@uci.edu

INTERESTS Deep learning algorithms with applications to images and high energy physics, Causal inference.

EDUCATION University of California, Irvine, Statistics, 2nd year PhD student 2016.9-now

GPA: 3.97/4.0, Advisor: Pierre Baldi
Sichum University Mathematics B.S.

Sichuan University, Mathematics, B.S. 2012 - 2016

Honor Class, 4 year National Pilot Program Fellowship receipient.

National University of Singapore, Applied Math 2014 - 2015

Temasek Foundation Scholarship, one-year study abroad programme.

TECHNICAL SKILLS Programming Languages: Fluent: Python, R; Intermidiate: Matlab, C, SAS

Deep Learning Related: Tensorflow, Keras, Theano, Pandas, Linux

TEST SCORES GRE: Quantitative Reasoning: 170/170, Verbal Reasoning: 157/170

RESEARCH AND INTERN EXPERIENCES

# Sherpa: Hyperparameter Tuning Machine for Neural Networks

2017.9-now

- Sherpa aims to provide a fast and parallel automatic hyperparameter search framework for training various kinds of deep neural networks.
- Lead the development of bayesian optimization algorithms for Sherpa.

### Antihydrogen Particle Detection by Deep Neural Network

2017.6-now

- A joint project with ASACUSA at CERN.
- Developed a package for analyzing over 3 million real annilation events generated from ASACUSA experiments. Wrote algorithms to efficiently separated the rising edges within the data.
- Propsed resnet-like deep neural network as a novel technique to distinguish antimatter signals from background noise. Our model outperforms the existing vertex construction algorithm.

### Deep Target Algorithms and Random Backpropagation

2016.9-12

- With Prof. Pierre Baldi at UCI.
- Developed and implemented several deep target learning algorithms and Random Backpropagation (RBP) Rules in both Theano and Tenserflow. Tested the algorithms on several benchmark datasets using multiple GPUs.
- Reseach on the proof of convergence properties of RBP algorithms. Constantly explore and evaluate new RBP rules.

### Quantative Trading Algorithms for Achieving Alpha

2016.3-6

- Internship at Huaxi Futures Co., Ltd.
- Historical data within 3000 trading days was crawled from web using python to backtest trading strategies. Developed and implemented several algorithms to select profitable factors as trading strategies.
- Improved the automatic trading system by adding new strategies.

TEACHING AND PRESENTATION

#### Teaching Assistant

2016.9-now

• Serving as teaching assistant for Stats 67 in Spring 2016, and Stats 7 in Fall 2017.

#### **Bayesian Causality**

2017.12

- Proposed a bayesian framework for causal relation computation.
- Present a poster in the workshop: From 'What If?' To 'What Next?' : Causal Inference and Machine Learning for Intelligent Decision Making, NIPS 2017

HOBBIES I am a competitive Go player (4th dan).