

Yutong Dai

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EDUCATION

University of Illinois at Urbana-Champaign (UIUC), IL, USA	Sept.2017 – May.2019
M.S. in Statistics	GPA: 4.00/4.00
Sichuan University (SCU), Sichuan, China	Sept.2013 – Jun.2017
B.S. in Mathematics with honors (Concentration in Statistics)	GPA: 3.69/4.00

RESEARCH & EXPERIENCES

Research: **Convergence Rate Analysis of Parallel Block Coordinate Descent Method**[\[Link\]](#) Dec.2016 – Jun.2017
Advisor: Prof. Yang Weng **Accepted by Journal of System Science and Complexity**

- Proposed synchronous parallel block coordinate descent algorithms for minimizing a genre of composite functions with sub-linear convergence rate
- Implemented algorithms to solve large scale logistic regression with ℓ_1 norm penalty

Research: **Attention Data Provides Insights into the Financial Market Bubble**[\[Link\]](#) Aug.-Nov.2016
Advisor: Prof. Yang Weng Submitted to *PIOS ONE*

- Utilized the search volume index as the novel and leading measurement of public attention to study the stock market bubble generating feedback hypothesis
- Tested the hypothesis on Nasdaq Composite, Dow Jones Industrial Average, and S&P 500 Index

Internship: **Anheuser-Busch InBev** Jan.2018 – Present
Data Scientist Urbana, IL

- Provided analytics and benchmarks of farmer production performance for global agronomist and procurement teams to improve barley productivity
- Revised machine learning algorithms with agronomists' on field knowledge to formulate a global barley production environment model that accounts for complex weather and soil systems
- Developed predictive models to suggest optimal management packages (variety, fertilizer, fungicide, crop rotation...) that help growers to hit highest barley yield
- Designed Smart Barley UI/UX prototype in Rshiny to dynamically visualize analytic results, like growers' production performance and highest yield management packages, and delivered it to agronomist teams
- Collaborated with computer scientists to scale up analytics results and put them into production environments

Project: **Show and Tell: Neural Image Caption**[\[Link\]](#) Nov.2017 – Dec.2018
Group Leader Advisor: Prof. Justin A. Sirignano

- Fine-tuned the 101 layered Residual Network pre-trained on the ImageNet as an image encoder to interpret image contents
- Designed and trained a Recurrent Neural Network with 3 layers of Long short-term memory(LSTM) cells as an image decoder to convert visual information into texts
- Calculated vocabulary scores from the image decoder's outputs and generated captions using the beam search method to obtain high quality captions
- Designed a simple UI for general audience to explore the prototype

Project: **Real Estate Market Data Analysis**[\[Link\]](#) Dec.2017
Group Leader Advisor: Prof. Feng Liang

- Performed data querying from website and exploration data analysis
- Explored how amenities and geo-location influence listing prices
- Developed a web-based data product incorporating with machine learning algorithms to help 1)Airbnb hosts to determine listing prices; 2)Airbnb customers to gain insight into Airbnb Boston rental markets

For my comprehensive resume, please go to my [home page](#).

HONORS & AWARDS

• <i>Bachelor's Thesis: Best Paper Award (0.58%)</i>	2017
• <i>Dean's List (Top 10)</i>	2014-2017
• <i>Meritorious winner, 2016 Interdisciplinary Contest In Modeling (8%)</i> [Link]	2016
• <i>2nd Prize, National College Students' Mathematical Modeling Competition</i>	2015
• <i>Excellent Student Leader, Sichuan University</i>	2014