

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	Dec.2016 – Dec.2017
Research Topic: Convergence Rate Analysis of Parallel Block Coordinate Descent Method [Link]	
Advisor: Prof. Yang Weng	Submitted to <i>Journal of System Science and Complexity</i> , under revision
<ul style="list-style-type: none">Proposed efficient synchronous parallel block coordinate descent algorithms for minimizing a genre of composite functions with sub-linear convergence rate guaranteedImplemented algorithms to solve large scale logistic regression with ℓ_1 norm penalty	

Research	Aug.2016 – Nov.2017
Research Topic: Attention Data Provides Insights into the Feedback Mechanisms in Financial Market Bubble [Link]	
Advisor: Prof. Yang Weng	Submitted to <i>PIOS ONE</i> , submitted
<ul style="list-style-type: none">Utilized the search volume index as the novel and leading measurement of public attention to study the stock market bubble generating feedback hypothesisTested the hypothesis on Nasdaq Composite, Dow Jones Industrial Average, S&P 500 Index with their Google Trend Index	

Internship	Jan.2018 – Present
Data Science Intern at Anheuser-Busch InBev Location: Urbana, IL	
<ul style="list-style-type: none">Provided analytics and benchmarks of farmer production performance for a global agronomist and procurement teams to improve barley productivityRevised Clustering algorithms with agronomists' on field knowledge to formulate global barley production environment model that accounts for complex weather and soil systemsProposed Inverse Predictive Models based on the Random Forest to suggest optimal management packages (variety, fertilizer, fungicide, crop rotation...) that help growers to hit highest barley yieldCollaborated 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	
<ul style="list-style-type: none">Fine tuned the 101 layered Residual Network pre-trained on the ImageNet as a image encoderDesigned and trained a Recurrent Neural Network with 3 layers of Long short-term memory(LSTM) cells as a image decoderCalculate vocabulary scores from the image decoder's outputs and generated captions using the beam search method	

Project: Real Estate Market Data Analysis	Dec.2017
Group Leader Advisor: Prof. Feng Liang	
<ul style="list-style-type: none">Performed data cleaning, querying, and exploration in RDeveloped data products to help Airbnb hosts to determine listing prices using Sparse Regression and Random ForestResearched how amenities and geolocation influence listing pricesDesigned a User Interface for customers to gain insight into Airbnb rental markets in Boston [Link]	

Contest: Interdisciplinary Contest in Modeling [Link]	Feb.2016
Group Leader Advisor: Prof. Rui Zhu	Awards: Meritorious Winner (Top 8%)
<ul style="list-style-type: none">Addressed the problem of ranking the shortage degree by using hierarchical cluster analysisModified Cobb-Douglas production function to find the mechanism of how social and environmental drivers influence supply and demandDevised an intervention strategy based on the existing Lesotho Highlands Water Project	

HONORS & AWARDS

<i>Bachelor's Thesis: Best Paper Award</i> (0.58%)	2017
<i>Dean's List</i> (Top 10)	2014-2017
<i>2nd Prize</i> , National College Students' Mathematical Modeling Competition	2015
<i>Excellent Student Leader</i> , Sichuan University	2014