

# Zihao (David) Xu

[https://github.com/zihaoxu/My\\_Portfolio](https://github.com/zihaoxu/My_Portfolio)

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## EDUCATION

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### Harvard University

Cambridge, MA

Master of Science in Data Science, GPA: 4.0

December 2020

- Related coursework: Data Science, Systems Development for Computational Science, Machine Learning, Advanced Analytics of Finance, Critical Thinking & Ethics in Data Science

### Pomona College

Claremont, CA

Bachelor of Arts, Computer Science & Mathematics, GPA: 3.96/4.0

May 2019

- Magna Cum Laude, Phi Beta Kappa Member, Sigma Xi Member, Pomona Scholar
- Related coursework: Artificial Intelligence, Algorithms, Computational Statistics, Big Data, Stochastic Operations Research, Probability, Statistical Theory, Bayesian Statistics, Econometrics

## WORK EXPERIENCE

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### Cornerstone Research

Los Angeles, CA

Summer Analyst

Summer 2018

- Cleaned, managed, and visualized datasets with >10 million observations using R, SQL and SAS to advise two major auto manufacturers on recall strategies
- Interpreted and critically analyzed the validity of statistical sampling methods employed by opposing expert
- Led R workshops for full-time analysts and enforced data organization and workflow within case teams
- Received full-time return offer in recognition of work quality and work ethics

### Scratch Financial, LLC

Pasadena, CA

Business and Credit Risk Analyst Intern

Fall 2017 – Fall 2018

- Performed A/B testing on two types of signage sent to 400 vet clinics and identified the signage that yielded statistically significant improvement of 11% in the average number of daily applications
- Devised and selected 6 out of 35 new variables that filter out high-risk loan applicants and reduced company overall default rate by 2 percentage points
- Built an actively used dashboard that visualizes temporal and geographical trends in important metrics
- Engineered scalable pipelines to clean and wrangle previously unhandled consumer credit data

### Pomona College Mathematics Department

Claremont, CA

Summer Researcher

Summer - Fall 2017

- Devised and implemented a new machine learning algorithm - Bag of Little Random Forests (BLRF) as an R package, utilizing a paralleled structure for faster computation
- Evaluated and visualized the statistical and computational performance of BLRF using simulated data sets
- Fine-tuned hyper-parameters of BLRF and analyzed their impact on accuracy and time consumption
- Authored paper, *Bag of Little Random Forests*, and won the first prize at 2017 Fall USRESP Competition

### Claremont Chinese Student Association (CSA)

Claremont, CA

President

Fall 2016 – Fall 2017

- Planned and coordinated 5 major on-campus events to promote awareness of Chinese culture
- Acquired \$4500 as external funding through successful negotiations with outside partners
- Provided 450 members with career assistance through alumni connections and alumni on-campus lectures

## SKILLS & MEMBERSHIP

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**Tech Skills:** Python (pandas, numpy, matplotlib, seaborn, sklearn, tensorflow.keras), R, SQL, Web Scraping, linux, version control (git), Machine Learning, Deep Learning - Computer Vision

**Publications:** **Z. Xu**, M. Salloum (2018), Deep Neural Networks for Object Enumeration, poster paper, 2018 IEEE International Conference on Big Data, available at <https://bit.ly/2D4FhbH>  
**Z. Xu**, J. Hardin (2017), Bag of Little Random Forests (BLRF), First Prize, 2017 Fall USRESP Competition, available at <https://bit.ly/2kecdFE>