Zhihao Huang

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Education

University of Michigan, Rackham Graduate School — Ann Arbor, USA
M.S. in Applied Statistics — Dec. 2018

- **Academic**: GPA: 3.96/4.0

Nankai University, School of Mathematical Science — Tianjin, China
B.S. in Mathematics and Applied Mathematics — Jul. 2017

- **Academic**: GPA: 3.5/4.0
- **Honors**: "Gongneng" Scholarship, 2014&2015

Skills

Programming Skills: C++, Python, R, Matlab, Stata, SAS, SQL, Hadoop, Microsoft Office and VBA, Linux, LaTeX
Language: Mandarin(native), English(fluent), TOEFL(112/120, speaking 27/30), GRE(V152+Q169+AW4.0)

Work Experience

Liberty Mutual Insurance Group — Boston, USA
Data Scientist - GRM Finance — Feb. 2019 - Current

- Develop planning and forecasting model for charge-off with survival models and time series models
- Improve forecasting accuracy from 90% to 95%
- Develop billing fraud model to identify fraudulent behaviors and reps
- Deploy the fraud model and estimate an underlying business value of $8.5M annually

Data Science Intern - Operations Visioning — Jun. 2018 - Aug. 2018

Project: Impact of Underwriter Touch on Sales

- Developed observational study on the value of underwriter touch for the sales of business insurance policies
- Conducted predictive modeling with glm, and causal inference with propensity score matching
- Estimated the value of touch that may increase 10k in sales and $1.5M in premium annually

Mobvoi Inc. — Beijing, China
Sales Data Analyst Intern — Feb. 2017 - Jun. 2017

- Conducted daily analysis on sales data, including sales trend prediction with linear model and sku correlation analysis
- Developed data visualization report platform with *R markdown (plotly)* and *Shiny* for CEO office
- Constructed VBA tools of data organization for sales team

Munich Re Group Beijing Branch — Beijing, China
Actuary and Data Analyst Intern — Jun. 2016 - Oct. 2016

Project: Motor Risk Prediction through Telematics Data Mining

- Developed innovative risk prediction models through motor telematics data mining (1 million records)
- Conducted data extraction with web-crawling, data analysis with one-way analysis, undersampling method, generalized linear model under *R* and *VBA*
- Accomplished the first applicable big data Vehicle Usage-Based Insurance product in Asia-Pacific

Research Experience

Unsupervised Feature Selection with Unknown Noise and Missing Data — Aug. 2016 - Apr. 2017
Research Assistant — Tianjin, China

Adviser: Pengfei Zhu, Associate Professor, School of Computer Science and Technology, Tianjin University

- Adopted Mixture of Gaussian for unknown noise, sparse method for feature selection and Damped Newton for optimization
- Conducted algorithm evaluation under *Matlab* with facial recognition and feature extraction tasks
- Accomplished the basic goal of the algorithm and achieved outstanding performance

Harbin Institute of Technology, School of Mathematical Science — Harbin, China
International Summer School of Mathematics — Jul. 2015

Adviser: Jianqing Fan, ORFE, Princeton University; Stanley Osher, IPAM, UCLA

- Coursework: Sparse High-Dimensional Statistical Learning (Penalized Least-Squares, Matrix Completion, etc.)

Extracurricular Activities

Davos Foreign Guests Dept.,, 2014 Summer Davos Economic Forum — Tianjin, China
Volunteer Team Leader — Sept. 2014

- Supervised team performance and scheduled duty roster