

# Simeng Shao

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## EDUCATION

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### University of Southern California

*PhD candidate of Statistics*

CA, United States

08/2017 - Present

· **Advisor:** Dr. Adel Javanmard

· **Research Interests:** High-dimensional Data, Functional Data Analysis, Graphical Model, Mixed Effect Model, Multivariate Analysis

### Renmin University of China

*B.S. Statistics*

Beijing, China

· **School of Information** Major: Mathematics & Computer Science

09/2013 - 06/2014

· Cumulative GPA: 3.57/4.0 (Top 8%)

· **School of Statistics** Major: Statistics

09/2014 - 06/2017

· Cumulative GPA: 3.76/4.0 (Top 10%)    WES: 3.84/4.0    Major GPA: 4.0/4.0

### UC Davis

*Global Study Program, Statistics*

CA, United States

09/2015 - 06/2016

· Cumulative GPA: 4.0/4.0

## HORNORS & AWARDS

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Highest Prize of Academic Scholarship (1/108)

2015 - 2016

Chancellor Scholarship (57 places among campus)

2015 - 2016

Second Prize of Academic Scholarship (Top 10%) twice

2013 - 2014, 2014 - 2015

Merit student (Top 15%)

2013 - 2014

Second prize in China Undergraduate Mathematics Contest in Modeling (Top 8%)

11/2015

Excellent Student Cadre (12/180)

2013 - 2014

Excellent Cadres of Student Association

2014 - 2015

## RESEARCH EXPERIENCE

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### Project: Classified Mixed Model Prediction (CMMP)

**Advisor: Professor Jiming Jiang**

Davis, CA

*Team Leader*

03/2016 - 06/2016

· The main objective is to utilize subject-specific random effects on top of the fixed covariates to identify a class that a new subject belongs to, thus make predictions of mixed effects and of future observations

### Project: Functional Data Analysis with Applications in Stock Market

**Advisor: Professor Hans-Georg Muller**

Davis, CA

*Core Member*

03/2016 - 10/2016

· The goal of the project is to apply FDA on 30-year S&P 500 indices, investigate the pattern and relationship and make predictions for future volatility

### Project: Functional Graphical Model for High-dimensional Data with Sparsity and Irregularity

**Advisor: Associate Professor Jianxin Yin**

Beijing

*Independent Researcher*

10/2016 -

· The main objective is to model the conditional dependence structure among multivariate Gaussian random processes using Graphical Model and extend to sparse and irregularly-observed data

### National University Student Innovation Program (NUSIP)

**Project: Investigation on Public's Perception and Acceptance of Nuclear Power Based on Contingent Valuation Method**

**A comparison between two representative cities in China**

Beijing

*Team Leader*

03/2015 - 05/2016

· Won Government project approval and financial support

· Creatively applied Contingent Valuation Method (CVM) to quantify people's acceptance of nuclear power

**China Undergraduate Mathematics Contest in Modeling**

Beijing

*Team Leader*

09/2015

- Won Second Prize in the national competition (top 8%)
- Realized mathematical models of taxi distribution with MATLAB based on queuing theory and Monte Carlo method, figured out the optimal subsidy plan using floating-point genetic algorithms (FGA)

**Project: Characterizing Smartphone Users Based on Their Applications Usage Pattern****Supervisor: Associate Professor Xiaoling Lu**

Beijing

*Core Member*

06/2015 - 09/2015

- Acquired and cleaned more than 1 million records of APP users, determined weights on 20+ APPs, designed 5 alternative formulas (e.g. TG-IDF) for calculating the likelihood of each gender

**EXTRA-CURRICULAR ACTIVITIES**

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**IIDATA Statistics Convention**

Davis, CA

*Core Member, Academic Team*

12/2015 - 05/2016

- Worked as a core member in the planning team of the first student-run Statistics Convention at UC Davis, attracted attendees and participants from universities across Bay Area, praised as "first-rate and professional" by Dr. Norm Matloff
- Devoted to the 6-month initiation and preparation process, attained, cleaned and analyzed datasets, drafted descriptions of data for participants, came up with questions and benchmark solutions and set up scoring criteria for judges
- Independently invited and contacted all mentors, in charge of Prediction Modeling Competition, assisted guest speakers and sponsors at the event

**Student Union of School of Information**

Beijing

*Associate Director, Culture Department*

06/2014 - 06/2015

- Awarded Excellent Leadership and Social Work (2015) and Excellent Cadres of Student Association (2015)
- Scripted, directed and starred in the department microfilm, won Excellent Prize in the school competition
- Planned 10+ cultural events (100+ attendees per event), planned the department annual gala (marked as the best annual gala in department history), directed and coordinated with other departments to implement rehearsal, took charge of performance arrangement

**Technology & Education: Connecting Culture, Summer Institute**

Binchuan, Yunnan

*Volunteer*

07/2015

- Awarded the Excellent team (2015)
- Worked as the leader of the branches of English and Maths, provided academic and pedagogical training to village school teachers
- Investigated the sociological and psychological reasons for village schools dropouts, read 30+ papers and visited dropout families in person, proposed constructive advice on discouraging students from dropping out of school

**SKILLS & INTERESTS**

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**Computer Skills**

Proficient in R, Matlab

Basic: Python, SQL, VBA, C language, HTML(JavaScript, CSS)

**Languages**

Chinese (Mandarin), English(TOEFL 107; GRE Q170, V154, AW 4.0)