

# Mengran Li

## Personal Summary

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I have an excellent foundation and experience in Computational Statistics, Statistical Modeling and R programming. I am currently searching for a PhD position in Statistics to develop my academic career.

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## Education

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2021 – 2022	MSc in Statistics University of Glasgow	Glasgow, UK
2015 – 2019	BSc in Statistics Southwestern University of Finance and Economics Thesis: Analysis of public opinion heat and emotion based on Hidden Markov model	Chengdu, China
2017 – 2019	BSc in Finance (Minor) Southwestern University of Finance and Economics Thesis: Performance evaluation of fund managers	Chengdu, China

## Research & Academics

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2021 – present	Research on Extreme Values of Streamflow in the U.S.A <b>Assistant</b> Summary statistics and kernel smoothing were applied to extract meaningful information from the data, detect patterns, etc. The features of streamflow were presented via hydrologic maps. The marginal models were fitted to identify the trends via stationary and non-stationary techniques and selected based on the AIC and the likelihood ratio was employed to test the significance. Return levels were calculated and plotted and bootstrapping evaluated the uncertainty. For the joint-fitting, estimations of the extremal coefficients based on Euclidean and hydrological distances in various approaches, such as madogram and bivariate Husler-Reiss distribution were applied to check the asymptotic dependence.	Glasgow, UK
2018 – 2019	Research on Public Opinion Heat and Emotion <b>Thesis</b> Got bullet screen text and video information on bilibili website through R package rvest. The NLPIR word segmentation system of Chinese Academy of Sciences was employed to analyze the emotion of barrage text. The entropy weight method was proposed to calculate the popularity of public opinion, and the hidden Markov model was established to analyze the characteristics of different stages of public opinion dissemination.	Chengdu, China

2017 – 2018	<p>Research on Tort Relief of Malicious Claims The National Social Science Fund of China</p> <p><b>Data Analysis</b> <b>Empirical analysis:</b> The degree of malice between the insurer and the insured, and the support of court decisions were quantified. The linear model was applied to identify the relationship among variables.</p>	Chengdu, China
2018	<p>American Mathematical Modelling Contest</p> <p><b>Modeller</b> <b>How American states perform on clean energy:</b> The GLM helped to better characterize how the energy profile of the states. The analytic hierarchy process (AHP) model was applied to measure the importance among different states through MATLAB. <b>Prediction of energy profile of each state:</b> The same variables from the GLM model were inherited to construct the vector auto regression (VAR) model. And E-views generated the prediction of energy profile of each state. Finally won the second prize.</p>	
2017	<p>Statistical Modeling Contest</p> <p><b>Team Leader</b> The default behavior of telecom users was predicted based on logit regression, random forest, SVM, etc. The prediction results were evaluated taking ROC and AUC as criteria.</p>	Chengdu, China
2016 – 2017	<p>Real Function Theory Textbook Revision</p> <p><b>Assistant</b> Assisted the professor in revising the real function theory textbook, including proof of sufficient and necessary conditions for set measurability, Cantor set and unmeasurable set.</p>	Chengdu, China

## Awards & Honours

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2018 – 2019	Academic Scholarship, Southwestern University of Finance and Economics
2016 – 2017	Academic Scholarship, Southwestern University of Finance and Economics
2015 – 2016	Excellent League Member, Southwestern University of Finance and Economics

## Technical Skills

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Computational statistics, Extreme value theory  
Data wrangling and visualization  
Expert in R and R Studio  
Python, Matlab, WinBUGS, Eviews, SPSS  
Reproducible research with R Markdown + LaTeX + HTML  
Web development (HTML, CSS, Hugo, blogdown, GitHub, Netlify)

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