

# Ran Wang

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## SUMMARY

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- **3 + years'** research experience in **causal inference/econometrics/forecasting via machine learning**.
- Working on **3 working papers** about **causal inference** and **econometrics via machine learning**.
- Working on **2 book chapters** about **Random Forest** and **Boosting Decision Trees in macroeconomic forecasting**.
- Strong communication skills demonstrated by **2 + years'** experience of **teaching assistant**;

## EDUCATION

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Ph.D. in Economics, University of California, Riverside	Sept 2020 (Expected)
M.A. in Economics, University of California, Riverside	Sept 2017
B.S. in Finance, Nankai University	June 2012

## RESEARCH INTERESTS

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Causal Inference, Econometrics, Machine Learning, Time Series Analysis, Data Mining.

## WORKING PAPERS

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### ***Identifying Heterogeneous Treatment Effect and Confounding Effect via Soft Decision Tree (Job Market Paper)***

- ✓ Proposed a new method for causal inference in the potential outcome framework for identifying heterogeneous treatment effects, instrumental variable's effects and confounding effects gave a group of feature variables, which cannot be resolved by the previous machine learning-based causal inference methods (e.g., Causal Forest, Double ML).
- ✓ Developed a powerful tool for precisely measuring the causal effects and deeply understanding the causal relations among economic variables for marketing strategies improving and evaluation.

### ***Unsupervised Feature Extraction Clustering for Crisis Prediction***

- ✓ Propose a new neural network-based clustering method for extracting features related to the economic crisis, resolving the issues in the dataset (missing values, time trend, imbalanced labels) and providing the risky/safe clusters for crisis prediction.

## BOOK CHAPTERS

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### ***Macroeconomic Forecasting in the Era of Big Data (published by Springer, coming soon)***

- **Chapter 13 Bootstrap Aggregating and Random Forest**, with Tae-hwy Lee and Aman Ullah
- **Chapter 14 Boosting**, with Jianghao Chu, Tae-hwy Lee and Aman Ullah

## HONORS

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Dean's Distinguished Fellowship, University of California, Riverside	Sept 2015
Excellent undergraduate graduation thesis, Nankai University	June 2012

## SKILLS

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**Programming Languages and Software:** R, Python, EViews, Stata, MATLAB

## OTHER EXPERIENCE

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Teaching Assistant ( <i>Statistics for Economics and Intro to Econometrics</i> )	Sep 2016 - Present
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## PROFESSIONAL SERVICE

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Referee of <b>Pakistan Journal of Applied Economics</b>	Sept 2017
Referee of <b>Journal of Quantitative Economics</b>	June 2018

## REFERENCES

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Tae-Hwy Lee (Co-Advisor)	Aman Ullah (Co-Advisor)	Ruoyao Shi (Committee Member)
Professor of Economics	Distinguished Professor of Economics	Assistant Professor of Economics
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