

# HAN LIU

George Washington University  
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## EDUCATION

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**Ph.D. in Economics**, George Washington University, Washington, DC 2021  
**M.A. in Economics**, Clemson University, Clemson, SC 2013  
**B.S. in Finance**, Central University of Finance and Economics, Beijing, China 2011

## SKILLS

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**Programming & Software:** Python, R, Stata, ArcGIS, Excel, LATEX, UiPath Robotic Process Automation  
**Language:** Mandarin (Native), English (Full professional proficiency)

## FIELDS OF SPECIALIZATION

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Urban and Regional Economics, Real Estate Finance, Applied Microeconomics, Applied Econometrics

## PROFESSIONAL EXPERIENCE

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**George Washington University**, Washington, DC August 2015 - Present

*Teaching Assistant, Instructional Core*

- Assisted with the course development of Graduate Teaching Assistant Certification Course to provide foundational training for new graduate assistants of George Washington University.
- Facilitated online discussions, graded and provided timely feedback on assignments.

*Lecturer, Teaching Assistant, Department of Economics*

- Taught undergraduate-level Principles of Microeconomics, Principles of Macroeconomics, and Introduction to Econometrics, with an overall teaching rating of 4.3/5.
- Initiated weekly meetings to guide the learning process of students and their communication between faculties and students.
- Delivered lectures, discussion sessions, and office hours to classes ranging from 10 students to 160 students with various levels of economics background.

**International Finance Corporation**, Washington, DC June 2020 - September 2020

*Research Analyst, Modeling Team, Economics and Development Impact Department*

- Automated data collection from large data sets across 200 countries using API and robotic process automation, and shortened the time needed for the previously manual process by 80%.
- Analyzed and statistically modelled detailed industry data to apply economic reasoning, and produced visualizations of the stylized facts of sectoral vulnerability factors using Stata.
- Wrote analytical reports on economic vulnerabilities due to COVID-19, and provided financial-driven policy implications to support the implementation of Anticipated Impact Measurement and Monitoring framework used across IFC.
- Identified data harmonization improvements, and collaborated with a team of economists and data scientists to re-design the internal data processing framework to enable data compiling at scale.

**The World Bank**, Washington, DC May 2015 - August 2016

*Short Term Consultant, Trade and International Integration Unit, Development Economics Research Group*

- Constructed harmonized and standardized data sets of custom data and household survey, to create a uniform database pooling 102 countries to support the team for multinational analysis.
- Applied synthetic control and difference-in difference methods to evaluate the impact of reforms to customs and other border management agencies.
- Created visualizations of welfare results as maps, figures, and tables using GIS, R and STATA, to illustrate the distributional impact of price changes on household consumption under tariff shocks.
- Collaborated with data engineering and business teams to provide policy and business implications on trade policy reform, by building input-output tables, trade policy dashboard, and reports.

## EMPIRICAL PROJECTS

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### Mapping Crime Data Using Spatial Analysis Tools in R

- Loaded spatial objects from shapefiles of large crime datasets from the National Institute of Justice.
- Clipped the crime points outside target space and produced cross polygon comparisons.
- Plotted crime heatmap with Leaflet using a own-created evenly spaced and finer grid, and added an open source layer of city map to create interactive crime maps.

### Estimating the Capitalization Rate of Multifamily Housing in Northern Virginia in Python

- Adopted a Python wrapper around the Zillow API to scrape information of multifamily housing in Northern Virginia based on zip code and address.
- Estimated the capitalization rate based on pooled-tenure hedonic method, and applied econometrics models to study the stylized facts of capitalization rate and housing price movements.
- Visualized the capitalization rates in forms of cross-sectional comparison and time series trend using plotting tools in Python.

## WORKING PAPERS

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How Should We Measure Shocks To Housing Return: Total versus Appreciation Return? (Job Market Paper)  
Shifting House Price Gradients: Evidence Using Both Rental and Asset Prices

## WORK IN PROGRESS

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Study on the Skill Intensity Ratio and Labor Market Dynamics among International Immigrations  
Measuring Total Return to Single Family Rentals Using Census Data

## HONORS & AWARDS

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James R. Webb ARES Foundation Fellowship	2020, 2021
Academic Excellence Teaching Assistantship Award	2015-2021
CCAS Dean's Graduate Conference Travel Grant	2020
Summer 2019 Pre-dissertation Fellowship	2019

## CONFERENCES & PRESENTATIONS

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2021: ASSA 2021 Annual Meeting (Virtual), American Real Estate Society Annual Conference (Virtual)  
2020: ASSA 2020 Annual Meeting (San Diego, CA), GW Economics SAGE Seminar (Washington, DC), International Real Estate Society doctoral symposium (Virtual)  
2019: Eastern Economic Association Conference (New York, NY), Urban Economics Day (Washington, DC), Asian Meeting of Econometric Society (Xiamen, China), AREUEA International Conference (Milan, Italy)  
2018: GW Economics SAGE Seminar (Washington, DC)

## SERVICE & MEMBERSHIPS

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Member: American Economic Association, Urban Economics Association, The American Real Estate and Urban Economics Association, Econometric Society  
Organizing Committee, 1st GW Student Research Conference, The George Washington University 2017

## REFERENCES

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**Prof. Anthony Yezer**  
Department of Economics  
The George Washington University  
[yezer@gwu.edu](mailto:yezer@gwu.edu)

**Assistant Prof. Bryan Stuart**  
Department of Economics  
The George Washington University  
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**Associate Prof. Leah Brooks**  
Trachtenberg School of Public Policy and Public Affairs  
The George Washington University  
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**Dr. Bob Rijkers**  
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