

# Dongyang He

[hedongyang00@gmail.com](mailto:hedongyang00@gmail.com) | [dongyanghe.netlify.app](https://dongyanghe.netlify.app) | [github.com/BlueFireSoul](https://github.com/BlueFireSoul)

## EDUCATION

|                                                                                                                                                                                                                                              |                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| <b>The Pennsylvania State University</b>   College of the Liberal Arts<br><i>Ph.D. Candidate in Economics (STEM)</i> <ul style="list-style-type: none"><li>Fields: Spatial Economics, Applied Econometrics, Applied Microeconomics</li></ul> | Expected May 2025<br>GPA: 3.73/4 |
| <b>The Pennsylvania State University</b>   Schreyer Honors College<br><i>M.A. in Economics, B.S. in Mathematics (Schreyer Scholar)</i>                                                                                                       | May 2019<br>GPA: 3.83/4          |

## SKILLS

### Economics

- Structural Estimation: Discrete Choice Model, Dynamic Demand, BLP, Spatial Model
- Causal Inference: Diff-in-Diff, A/B Testing, Regression Discontinuity, Instrumental Variable
- Machine Learning: Regularized Regression, Clustering, Random Forests, Synthetic Control

### Programming

- Modeling: Python, R, Stata, Matlab, SQL, Shell, ArcGIS, SQL

## WORK EXPERIENCE

|                                                                                                                                                                                                                                                                                                                                                                                           |                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| <b>Research Assistant</b> , Department of Economics, the Pennsylvania State University<br><ul style="list-style-type: none"><li>Implemented a dynamic education demand model to evaluate the effects of cash transfers on school enrollments in Mexico.</li><li>Leveraged high-performance computing infrastructure, ArcGIS, Git, R, and Python for data analysis and modeling.</li></ul> | May 2022 - Aug 2022 |
| <b>Short-Term Consultant</b> , European Bank for Reconstruction and Development<br><ul style="list-style-type: none"><li>Compiled, cleaned, visualized, and analyzed maps and census data from Mumbai, India.</li><li>Recognized and awarded Bates White Research Funding (\$ 1500) for significant contributions to the project.</li></ul>                                               | Jan 2019 - May 2019 |

## RESEARCH EXPERIENCE

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| <b>Distributional Impacts of Exclusionary Zoning Policies</b> <ul style="list-style-type: none"><li>Investigated the differential impacts of density and height regulations across income groups in the greater Boston area, using large-scale parcel-level housing data covering 1 million residential properties.</li><li>Employed spatial discontinuity design to examine the impact of zoning restrictions on housing supply and demographic composition.</li><li>Formulated a theoretical housing production model to rationalize the impacts and interactions of density and height regulations on housing supply.</li><li>Developed a discrete choice model to estimate preferences of heterogenous households over locations and housing.</li></ul> | 2023 |
| <b>Migration and Proximity Preference in Fertility Decision</b> <ul style="list-style-type: none"><li>Examined how distance from hometown might impact people's fertility decision, using large-scale survey data covering 5 million households in the U.S. from 2000 to 2019.</li><li>Constructed a discrete choice model to estimate households' preferences over locations, fertility choices, and consumption.</li><li>Discovered that changes in migration pattern can account for 5% of the changes in fertility rate since 2000.</li></ul>                                                                                                                                                                                                           | 2022 |
| <b>Industrial Payments and Physicians' Prescriptions</b> <ul style="list-style-type: none"><li>Explored the impact of industrial payments on physicians' prescription choices in the Statin market, using over 10 million prescription records from 16,000 physicians during 2016 and 2017.</li><li>Applied a split-sample Lasso approach to systematically select controls and instruments from around 500 potential variables for demand estimation.</li></ul>                                                                                                                                                                                                                                                                                            | 2020 |

## LEADERSHIP EXPERIENCE

|                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| <b>Founder and Organizer</b> , International Trade Reading Group, Penn State<br><ul style="list-style-type: none"><li>Established and led the International Trade Reading Group, overseeing weekly research presentations for the past three years, totaling over 100 sessions.</li><li>Attracted participation from 13 Ph.D. researchers in the field, fostering research discussions and collaborations.</li></ul> | 2020 – Present           |
| <b>Instructor</b> , Department of Economics, Penn State<br><ul style="list-style-type: none"><li>Guided and instructed a cohort of 70 undergrad students on Intermediate Microeconomics and International Trade.</li></ul>                                                                                                                                                                                           | Summer 2021, Summer 2023 |