

# MIKE (JIAFANG) HUANG

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## EDUCATION

### Cornell University

Ph.D. Applied Economics and Management

*Expected May 2025*

M.S. in Applied Economics and Management

*Aug 2022*

### University of Illinois at Urbana-Champaign

B.A. Economics, B.S. Statistics

*May 2019*

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## RESEARCH INTERESTS

Environmental Economics, Health Outcomes, Air Pollution, Natural Disasters, Real Estate

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## PUBLICATION

“**A Thousand Cuts: Cumulative Lead Exposure Reduces Academic Achievement**”, with Alex Hollingsworth, Nicholas J. Sanders, and Ivan Rudik (Forthcoming), *Journal of Human Resources*.

- **Media Coverage:** The 74, Tradeoffs, The Hill, Econofact, The Guardian

**Abstract:** We study how ambient lead exposure impacts learning in elementary school by leveraging a natural experiment where a large national automotive racing organization switched from leaded to unleaded fuel. We find increased levels and duration of exposure to lead negatively affect academic performance, shift the entire academic performance distribution, and negatively impact both younger and older children. The average treated student in our setting has an expected income reduction of \$5,200 in present value terms. Avoiding said treatment has an effect size similar to improving teacher value added by one-fourth of a standard deviation, reducing class size by 3 students, or increasing school spending per pupil by \$750. The marginal impacts of lead are larger in impoverished, non-white counties, and among students with greater duration of exposure, even after controlling for the total quantity of exposure.

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## WORKING PAPERS

### “Natural Disasters and The Role of Expectation: Evidence from Hurricane Sandy”, *Job Market Paper*

**Abstract:** I examine the impact of Hurricane Sandy and the role of expectations about flood risk on residential and commercial real estate markets in New York City. Using a repeat sales framework, I estimate how Sandy affected housing prices differently across properties depending on their pre-Sandy floodplain status. I find that flooded residential properties within a floodplain experienced price declines of 7%. In contrast, residential properties flooded outside a floodplain experienced declines that were 4 percentage points greater. This disparity is even more significant for commercial properties, where the impact of Sandy on properties outside a floodplain is more than double compared to those within the floodplain. These price declines are enduring, with prices not returning to pre-flood levels even ten years later. I analyze several potential determinants of this heterogeneous effect and find that locations outside a floodplain experienced higher damage levels, had lower flood insurance take-up rates, and had increased out-migration of financially well-off individuals. A back-of-the-envelope calculation suggests that if all flooded properties been previously assigned floodplain status, property value losses from Sandy may have been \$220 million lower.

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## WORK IN PROGRESS

### “After the Storm Surge: Hurricanes, Local Crime Rate and Federal Disaster Relief”

**Abstract:** Hurricanes are the costliest natural disasters in the United States, causing significant direct economic losses and substantial negative externalities. This paper estimates the impact of hurricanes on a frequently

overlooked social issue: local crime rates. The findings reveal that hurricanes increase larceny or stolen property crime by 7.2%, burglary by 9.9%, robbery by 19.6%, and overall property crime by 6.7%, resulting in an average social cost of \$27,960 per county. Additionally, the increase in crime is more prevalent in areas with lower socioeconomic status and higher heterogeneity. The study also evaluates the efficiency and effectiveness of current federal assistance programs and estimates the benefits of mitigation project investments.

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## OTHER RESEARCH EXPERIENCE

Graduate Research Assistant, Prof. Ivan Rudik	<i>Dec 2019-Aug 2022</i>
Graduate Research Assistant, Prof. Todd Gerarden	<i>Sep 2022-Nov 2022</i>

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## TEACHING EXPERIENCES

### Cornell University

AEM 6940, Introduction to Machine Learning (Graduate)	<i>Spring 2024</i>
AEM 2500, Environmental and Resource Economics	<i>Fall 2023</i>
AEM 4510, Environmental Economics	<i>Spring 2023</i>
AEM 6325, Leadership and Management in Sports (Graduate)	<i>Fall 2022</i>
AEM 4940, Economics of Vice and Corruption	<i>Spring 2020</i>
AEM 4150, Price Analysis	<i>Fall 2019</i>

### University of Illinois at Urbana-Champaign

Economics Tutor, Department of Economics	<i>Spring 2018, Fall 2018, Spring 2019</i>
ECON 4400, Labor Economics	<i>Spring 2019</i>
ECON 4900, Game Theory	<i>Fall 2018</i>

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## AWARDS

### Cornell University

George F. Warren Award for outstanding paper	<i>Apr 2023</i>
Edward and Janet Heslop Fellowship	<i>May 2022</i>

### University of Illinois at Urbana-Champaign

Economics Department Distinction (4 out of 1300+)	<i>May 2019</i>
Dean's List	<i>Dec 2015-May 2019</i>

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## PROFESSIONAL EXPERIENCES

<b>Syngenta</b> <i>Data Science Intern</i>	<i>May 2024-Aug 2024</i>
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- Implemented LightGBM to impute missing genotype reference labels, achieving 82% classification accuracy.
- Developed residual neural networks for crop yield forecasting, resulting in a 15% accuracy gain over various tree-based ensemble models and traditional genomics prediction model.
- Built a one-click automated pipeline from scratch with parallel computing for data pre-processing and machine learning model implementation, resulting in a 50% reduction in output production time.

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## LANGUAGES AND SKILLS

**Programming and Software:** R, Python, Matlab, L<sup>A</sup>T<sub>E</sub>X, Git  
**Language:** Chinese (native), English (fluent), French (classroom)  
**Citizenship:** Chinese

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## REFERENCES

**Ivan Rudik (chair)**

Associate Professor

Charles H. Dyson School of Applied Economics  
and Management

Cornell University

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**Nicholas J. Sanders**

Associate Professor

Brooks School of Public Policy and Department  
of Economics

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