

# Kieran Douglas

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## EDUCATION

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### University of California, Davis | *MSc* 2025-2026

- Degree: Agricultural and Resource Economics
- Emphasis: Development and Environmental Economics
- Location: Davis, California

### University of Arizona | *BA, Summa Cum Laude* 2021-2025

- Degree: Economics
- Minor: Population Health Data Science
- Location: Tucson, Arizona

## RESEARCH EXPERIENCE

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### Student Researcher August 2023 - Present

*University of Arizona — Applied International Development Economics (AIDE) Lab*

- *Mining meaning: Conducting AI-assisted reviews of economic literature* - Co-authored a paper which exploits machine learning natural language processing techniques to aid in large scale meta-analysis, literature review, and data collection, specifically as it related to exploring the validity and interchangeability of rainfall metrics used in instrumental variables regression. The paper contributes to a broader interest in an early exploration of the potential effects of AI on labor markets.
- *Integrating Weather and Land Cover Data into Geospatial Impact Evaluations* - Contributed to a book chapter which provided resources to help guide researchers to thoughtfully use (and avoid misuse) of weather, vegetation, land cover, and extreme event data in the context of geospatial impact evaluation. Conducted an extensive literature review on specific use cases for remote sensing products.
- *Variable selection in economic applications of remotely sensed weather data: Evidence from the LSMS* - Contributed code and reviewed literature, exploring 174 papers to identify common rainfall metrics used as an instrument and show the extent of their ad hoc use in predicting a range of outcomes.
- *The Mismeasure of Weather: Using Remotely Sensed Earth Observation Data in Economic Context* - Prepared World Bank LSMS data for analysis by cleaning and managing variables using Stata and GitHub for version control.
- Internship: In 2023, worked in a student team on a replication and extension of Building Nations through Shared Experiences: Evidence from African Football. In 2024, served as lead undergraduate peer mentor in the student team working on the Mining Meaning project.

### Undergraduate Research Assistant August 2024 - August 2025

*Equitable Agriculture and Environmental Management (EAEM) Program*

- Attended a two-week bootcamp where I received training in Geographic Information Systems (GIS), R for Econometrics, causal inference, and statistical analysis.
- Engaged in a cohort-based mentoring program, developing skills for graduate school and for work in applied economics and/or geography.
- Conducted a preliminary analysis, exploring the impact of environmental tax incentives on labor market outcomes in areas with relatively high pollution burden.

## Undergraduate Research Intern

June 2024 – August 2024

### UROC-SRI Program

- Contributed to the existing literature on the use of weather data as an instrumental variable, developed into the Mining Meaning project.
- Developed a fine tuned large language model to process hundreds of academic papers and extract specific information.
- Wrote a comprehensive literature review that tied together critiques of instrumental variables regression and provided suggestions for methodological improvements to improve variable selection.

## PUBLICATIONS AND PRESENTATIONS

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### Publications

- *Exploring Complications With Instrumental Variable Selection and Their Solutions.* (2024). Undergraduate Research Opportunities Consortium.

### In Progress

- **K. Douglas**, J.D. Michler, A. Josephson. (2024). *Mining meaning: Conducting AI-assisted reviews of economic literature.*
- Agme, C.D., **K. Douglas**, J.D. Michler, A. Josephson. (2024). *Variable selection in economic applications of remotely sensed weather data: Evidence from the LSMS.*

### Presentations

- Presented *Exploring Complications With Instrumental Variable Selection and Their Solutions* at the Undergraduate Research Opportunities Consortium Summer Colloquium, University of Arizona, Tucson, AZ, August 7, 2024.
- Poster Presentation of *Exploring Complications With Instrumental Variable Selection and Their Solutions* at the Undergraduate Research Opportunities Consortium Poster Session, University of Arizona, Tucson, AZ, August 10, 2024.
- Research Presentation on *Ambient Air Pollution Concentrations and Poverty in American Cities*, EAEM University of California Santa Barbara, Santa Barbara, CA, August 20, 2024.
- Presented *Mining Meaning: Conducting AI-Assisted Reviews of Economic Literature* at the VIP and CURES poster/presentation session, University of Arizona, Tucson, AZ, April 24, 2025.
- Supported Drs. Josephson and Michler in a presentation and panel on the use of LLMs in applied economics research at the Agricultural and Applied Economics Association's annual conference (AAEA), Denver, CO, July 28, 2025.

## HONORS, AWARDS, AND DISTINCTIONS

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Wildcat Recognition Tuition Award, University of Arizona	<b>2021, 2022, 2023, 2024, 2025</b>
Undergraduate Research Opportunities Consortium SRI Program	<b>2024</b>
Dean's List with Distinction, University of Arizona	<b>2021, 2022, 2023, 2024, 2025</b>
Graduated Summa Cum Laude, University of Arizona	<b>2025</b>
1st place in Choice Awards at the UA Vertically Integrated Projects session	<b>2025</b>
<i>Non-Residential Supplemental Tuition Fellowship</i> , University of California, Davis	<b>2025, 2026</b>

## PROFESSIONAL EXPERIENCE

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### Research Assistant

August 2023 – Present

*University of Arizona — Applied International Development Economics (AIDE) Lab*

- Co-authored two academic papers related to rainfall metric selection for IV regression.
- Cleaned and wrote executable code files along with replication package development.
- Created a proof-of-concept for the utilization of large language models as part of the data collection and literature review process.
- Conducted and published a replication of a study that looked to quantify the extent to which large scale community events (soccer games) impacted reductions in inter-ethnic violence in Africa.
- Received intensive training in GIS methods and Econometrics through the USDA-funded Equitable Agriculture and Environmental Management Program in Santa Barbara.

### Teaching Assistant/Reader

August 2025 – Present

*University of California, Davis — Agricultural and Resource Economics*

- Worked as a teaching assistant/reader for undergraduate economics courses at UC Davis.
- Assisted professors with grading, proctored exams, and supported students as they navigated a new subject.

### Private Tutor

August 2025 – Present

*Self Employed*

- Worked as a private tutor for students taking Advanced Placement and undergraduate-level microeconomics courses.
- Created a personalized curriculum for students to supplement their coursework.

### Barista

August 2016 – July 2025

*Caffe Luce, Ren Coffeehouse, Epic Cafe — Tucson, Arizona*

- Worked as a barista and cashier, serving high volumes of customers.
- Developed strong relationships with coworkers and customers.
- Supported the construction of a new menu and re-branding post pandemic shutdown.
- Trained multiple new employees on job requirements and best practices.

## REFERENCES

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- **Anna Josephson, PhD**, Associate Professor, University of Arizona, aljosephson@arizona.edu
- **Jeffrey Michler**, Associate Professor, University of Arizona, jdmichler@arizona.edu
- **Kathy Baylis**, Professor, University of California, Santa Barbara, baylis@ucsb.edu
- **Antonio Rubio**, Assistant Professor, University of Arizona, antoniorubio@arizona.edu
- **Kevin Novan**, Associate Professor, University of California, Davis, knovan@ucdavis.edu