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Professional Summary Highly analytical and results-driven PhD Candidate in **Agricultural and Resource Economics** with a strong foundation in econometric modeling, spatial analysis, and advanced statistical methods. Seeking to leverage expertise in **causal inference**, **big data analysis**, and **economic modeling** to solve complex business problems in data science, tech, or consulting. Proven ability to translate complex research into actionable insights, communicate findings to diverse audiences, and manage multiple high-impact projects.

Core Competencies

- **Econometrics & Statistical Modeling:** Causal Inference (DiD, RDD, IV), Spatial Econometrics, Time-Series, Machine Learning Fundamentals.
- **Data Analysis & Programming:** Expert in **Stata, R, and Python** (Pandas, NumPy, Scikit-learn, GeoPandas). Proficient in **LaTeX**.
- **Data Visualization & GIS:** Experience with Geographic Information Systems (GIS) and generating clear, professional data visualizations.
- **Domain Expertise:** Environmental Economics, Urban/Spatial Economics, Policy Evaluation, Market Analysis, Policy Evaluation.

Selected Projects & Research Quantifying Environmental Risk & Market Inefficiency in Urban Housing **Role:** Designed an **equilibrium housing market model** to quantify the economic costs and market response to environmental hazards (land subsidence) in Mexico City **Methodology:** Exploited quasi-random variation in sinking intensity using **spatial econometric methods** to estimate the impact on property values. **Key Results:** Found that subsidence imposes an estimated **$33 billion USD** in economic costs, with **12%** due to information frictions that inefficiently increase housing stock in risky areas. **Impact:** Provided evidence on the financial externality of groundwater depletion and the need for improved public information to enhance market efficiency.

Systematic Evaluation of Gains from Water Trading Models **Objective:** Conducted a **systematic meta-analysis** of peer-reviewed literature to evaluate the accuracy and policy relevance of water trading models. **Methodology:** Developed a framework to assess how models incorporate key local context factors (e.g., third-party impacts, transaction costs, legal environment). **Finding:** Estimates **vary widely** and are often less likely to account for critical real-world features like transaction costs, impacting policy interpretation.

Modeling Structural Vulnerability to Environmental Hazards **Methodology:** Combined novel **plot-specific differential subsidence estimates** with a representative resident survey to estimate **structural fragility curves** and damage thresholds[cite: 109]. **Impact:** Extrapolated findings to a city-wide analysis to calculate damages and vulnerability at a city-block level, providing a tool for **city planning and risk assessment**[cite: 109].

Research & Professional Experience **Graduate Student Researcher**, UC Berkeley (Various PIs) 2021–2025 [cite: 108]

- Conducted advanced quantitative research, including model development and data analysis for multiple faculty across departments[cite: 108].
- Managed large, complex datasets for projects in environmental, urban, and development economics[cite: 108].

Analyst, National Laboratory for Public Policy (LNPP)   2018–2020 [cite: 108]

- Applied economic principles and quantitative methods to evaluate public policy outcomes[cite: 108].

Education Expected May 2026PhD, Agricultural and Resource EconomicsUniversity of California, Berkeley-Berkeley, CADissertation: "Essays in Environmental and Urban Economics" [cite: 14, 15] 2018Master's Degree in EconomicsCIDEMexico City, MexicoBest applied thesis, Class of 2018 [cite: 41, 95] B.Sc. in Economics and Spanish LiteratureUniversity of OregonEugene, ORHonors: Phi Beta Kappa [cite: 38, 96]

Select Grants & Awards **UC Dissertation Fellowship** ($37,000) [cite: 87] **Fisher Center for Real Estate Research Grant** ($15,000, awarded twice) [cite: 90, 91] **Giannini Foundation Minigrant** ($35,000) [cite: 91] CEGA Development Economics Challenge Grant ($5,000) [cite: 88] Outstanding Graduate Student Instructor Award [cite: 94]

Teaching & Mentoring Leadership **Instructor, Training for New Graduate Student Instructors**, UC