Renan Chaves Yoshida

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EDUCATION

Stanford University (*PhD Candidate in Economics*) 2019-Winter 2025

- Relevant courses: Causal Machine Learning, Quantitative Methods, Econometrics

PROFESSIONAL EXPERIENCE

Applied Scientist Intern (Amazon - Seattle, WA) Summer 2024

- Led a project to generate and optimize LLM responses for a business case.
- Applied advanced prompt engineering techniques, achieving a 10% reduction in KL divergence.
- Successfully deployed a LLM-powered application to production, cutting response time from weeks to one day and enabling company-wide adoption at near-zero cost.

Causal Inference Intern (Wayfair - Boston, MA) Summer 2023

- Implemented a new randomization inference approach to experimental lift estimates.
- Developed scalable code enabling easier accessibility to the new approach.
- Showed new approach reduced p-values by 30% compared to the previous methodology.
- Improved inference led to more accurate assessment of the effect of pricing strategies on KPIs.

PROJECTS

Media and Land Conflict

- Estimated a migration model to predict occupiers' origin, using feature engineering and XGBoost.
- Combining IV with difference-in-differences, showed that media increased by 1.6 percentage points the share of landless population engaged in land occupations.

Property Rights and Deforestation in the Amazon

- Used double-robust methods to achieve sample balance.
- With a staggered difference-in-differences approach, showed that granting property rights reduced deforestation in the Amazon by 7 percentage points.

Heterogeneous Causal Effects of Poverty on Attention

- Subsampled experiment data to assess robustness of causal ML methods to settings with selection.
- Implemented meta-learners and causal forests using R.
- Showed that S- and T-learners were able to accurately sort the sample in terms of true ATE quartiles, while X-learner and causal forest were not.

Speed Limits and Road Accidents

- Led a team of four in an econometrics competition in Brazil.
- Applying synthetic control techniques, showed that a reduction in speed limits had only a modest decrease in accidents and was not cost-effective, earning 1^{st} place at the competition.

Direct Sales and Bargaining (*forthcoming* at RAND Journal of Economics)

- Using a discrete choice model, estimated a 1.88 demand elasticity for ads.
- Showed manufacturers have 90% higher bargaining power than retailers.
- Through simulations, showed direct sales increase efficiency and improve customer welfare by 81%.

SKILLS

Programming Languages: Python, SQL, R
Econometrics and Causal Inference: IV, RDD, DiD, Synthetic Control, A/B tests, Bayesian inference
Machine Learning: Random Forests, Gradient Boosting, Neural Networks, Causal ML
LLMs: Prompt Engineering, Fine-Tuning, Deployment
Production Tools: Docker, AWS, S3, EC2
Languages: Portuguese (native), English (Fluent), Spanish (Advanced)