4114 Ohio Street, Apt 204, San Diego, CA 92104 860.670.1625, varmenta@ucsd.edu

#### **EDUCATION**

**UC San Diego** 

La Jolla, CA Doctoral Student, Economics Class of 2025

**Northeastern University** 

Boston, MA

2016

Major: Bachelor of Arts in Economics/International Affairs

Magna Cum Laude

GPA: 3.702

Minor: Global Social Entrepreneurship

Relevant Coursework: Econometrics, Micro & Macro Theory, Development Econ, Gender & Dev, Statistics **London School of Economics** London, United Kingdom

• Courses include Development Economics, Development in the Intl. Political Economy Summer 2015 Social Entrepreneurship Field Research Cape Town, South Africa

Consulted with Cape Flats entrepreneurs, assisting with strategy and profitability

Summer 2014

Awarded funding for business plan project for implementation by local boxing academy

# **SUBMITTED PAPERS**

Movin' on Up? The Impacts of a Large-Scale Home Ownership Lottery in Uruguay

With Craig McIntosh, Felipe Monestier; Rafael Pineiro; Fernando Rosenblatt; Guadalupe Tunon. Submitted for publication October 2022.

## **WORKING PAPERS**

# Obtaining Externally Valid Heterogeneous Treatment Effects

GPRL Working Paper No. 20-108

August 2020

- A note on how to apply lessons from "External Validity in a Stochastic World" (Udry & Rosenzweig, 2020) so that one can create HTE estimates less sensitive to the timing at which an experiment was run.
- Provided accompanying Stata code to facilitate ease of adoption.

#### **RESEARCH IN PROGRESS**

### Rainfall Expectations and Agricultural HH Decision Making

Confirmed data access from GPRL

- Exploiting a novel dataset that contains respondents' objective and subjective rainfall recall, as well as their expectations to see how the behavior differs across of individuals classified as pessimistic / not
- Observed correlation between pessimists selecting into less risky crop portfolio mixes
- Constructed an ML Algorithm taking advantage of supplementary data to predict HH Types as pessimistic
- Able to take advantage of multiple satellite rainfall data sources and definitions to see which rainfall definitions are most salient to respondents contributing to the methodology and behavioral literature
- Able to take advantage of breaks in respondent answers when rainfall levels don't correlate with Best/Worst Classified Farming Seasons to develop empirically tuned Upside Down U of rainfall returns

Impact of Ag. Extension on the Structure of Social Networks Classifying Smallholder Farmer Activity using Ground-Truth Data Confirmed data access from GPRL Confirmed data access from GPRL

#### **ACADEMIC WORK EXPERIENCE**

## Global Poverty Research Lab, Northwestern University

Evanston, IL

Senior Research Analyst

August 2017-August 2020

- Performed regression analysis on multi-armed agricultural RCT, exploring heterogeneity across rainfall distribution, gender and soil dimensions with marginal effect analysis
- Made use of both Causal Forest and Double Machine Learning algorithms to search for Heterogeneity
- Wrote automated Stata programs to perform at one-touch; a Post Double Selection LASSO, Marginal effects at desired points of an out-of-sample Rainfall Profits Surface, Randomization inference on those marginal effects and finally Bonferroni Q value adjustment on the final Rand.-Inf. P-Values
- Assisted with more senior administrative research tasks, managing stakeholders, hiring and overseeing the training process for new Research Analysts, managed multiple Undergraduate Research Analysts

# **Innovations for Poverty Action**

New Haven, CT

Research Analyst for Dr. Christopher Udry, DIRTS Project

August 2016-August 2017

- Oversaw data collection of a 3,120 Household Sample RCT, performing data quality assurance checks
- Performed data cleaning on collected data in Stata software, examining outliers and summary stats
- Assisted in writing academic papers, project reports and policy memos on a variety of topics
- Partook in design of survey questionnaire items and survey construction with SurveyCTO software

#### SKILLS

Computer: Professional Level Programmer in Stata, Proficient in R, Familiar with Python, QGIS and ArcGIS

#### **PERSONAL INFORMATION**

Date of Birth: December 13, 1993

Citizenship: US Citizen

Unrelated Interests: Astrophotography, Filmmaking, Milkshakes, Boardsports