

Isai Garcia-Baza

Ph.D. Education Policy & Computer Science (minor)

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EDUCATION

University of North Carolina-Chapel Hill

Expected May 2026

Ph.D. Student in Education Policy

Ph.D. Minor in Computer Science

B.A. Psychology with Honors

May 2017

DATA & PROGRAMMING SKILLS

Machine Learning: Python (scikit-learn, imbalanced-learn, statsmodels, pandas, NumPy, Matplotlib TensorFlow)

Programming: Python, R, STATA, SPSS

Reporting and Data Visualization: Jupyter Notebook, Matplotlib, R Markdown, ggplot2, Quarto

Version Control: Git, GitHub

Data Collection: Survey development (RedCap, SurveyMonkey, SurveyGizmo), focus groups, interviews in English, Spanish

Statistical Expertise: Causal Inference, Statistical Modelling, Machine Learning, Econometrics

RESEARCH EXPERIENCE

School of Education, UNC – Chapel Hill

Aug. 2021 – Present

Graduate Research Assistant

- Analyze large-scale administrative data by first combining administrative data sourced from 5 databases across 16 institutions resulting in 13 million observation data set
- Trained Random Forest and alternative classification models to predict student grades
- Iterated across model prototyping and feature engineering cycles
- Balanced data using SMOTE, Random Over Sampling, Random Under Sampling
- Tuned models using K-fold cross validation & assessed using balanced accuracy to select best model
- Analyzed American Community Survey (ACS) zip code-level data from the United States Census API
- Conducted Principal Component Analysis (PCA) to identify proxy variables for socioeconomic status
- Trained LASSO regression model for comparison against PCA regression
- Compared running models of proxy variables and administrative data to evaluate gaps in measures
- Developed internal STATA tool for automatically generating data quality reports with variable labels
- Strengthened causal inference claims by implementing propensity score matching

Child Trends – Bethesda, Maryland

August 2017 – January 2021

Senior Research Assistant

- Developed surveys for randomized control trial evaluations of advancing social science
- Analyzed survey findings and disseminated findings through drafting of external and internal reports
- Web scraped Twitter web data & coded qualitatively
- Analyzed the United States Census data
- Conducted usability testing of data visualization
- Managed quantitative data & monitored national reach of news service through Meltwater analytics