

# Max Ghenis

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## Summary

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Policy entrepreneur, technologist, and economist building computational tools that democratize policy analysis. Founder of PolicyEngine, a nonprofit software platform that computes personalized and population-level impacts of tax and benefit reforms. Expert in microsimulation modeling, machine learning for survey data enhancement, and economic impact assessment.

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## Professional Experience

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### Co-founder and CEO, PolicyEngine

*October 2021 - Present*

- Founded and lead PolicyEngine, a nonprofit software platform enabling policymakers, researchers, and citizens to analyze the personalized and population-level impacts of tax and benefit policy reforms
- Built comprehensive social insurance program models including eligibility rules and benefit calculations for Medicaid, CHIP, ACA premium tax credits, SSI, Social Security benefit taxation, and other federal and state programs
- Serve diverse users including government agencies (Joint Economic Committee, DC Council, NY Senate), research organizations (NBER), universities (Georgetown, UMich), think tanks (Niskanen Center, Arnold Ventures), and advocacy organizations nationwide
- Spun off PolicyEngine from the UBI Center in October 2021, launching PolicyEngine UK to calculate UK-wide and personalized impacts of customizable tax and benefit reforms
- Launched PolicyEngine US in 2022, expanding microsimulation capabilities to all 50 states and federal programs

- Secured and delivered over a dozen grants, research contracts, and API service agreements with partners including government agencies (Federal Reserve Bank of Atlanta), research organizations (NBER), think tanks, and advocacy organizations
- Built computational models simulating how hundreds of thousands of households respond to policy changes across tax and benefit programs
- Enhanced microsimulation accuracy using machine learning for variable imputation and survey weight calibration

## **Founder and President, UBI Center**

*April 2019 - March 2023*

- Created an open source think tank conducting quantitative research into universal basic income and cash transfer policies
- Managed team of up to a dozen researchers, collectively producing over 60 reports and interactive analytical products
- Developed open-source tools for distributional policy analysis, including microdf Python library for weighted survey data analysis
- Published research influencing policy debates on child allowances, carbon dividends, and tax reform

## **Independent Economics Researcher**

*July 2018 - March 2019*

- Produced a synthetic releasable version of the IRS Public Use File for open-source tax analysis as part of the Open Source Policy Center's Tax-Calculator project (Python)
- Contributed to Tax-Calculator's imputation of variables from Current Population Survey to IRS data sets
- Conducted distributional analysis of federal cash transfer policies including EITC, CTC, and UBI (Python+Jupyter)

## **Product Analyst / Data Scientist, YouTube**

*July 2015 - July 2018*

- Led analytics for emerging markets and YouTube Go—an app for low-bandwidth users—including modeling user retention, designing and analyzing experiments and quasiexperiments, and advising on data infrastructure
- Associated geographic consumption of video segments with economic indicators
- Built tool for automatically estimating causal impact of mobile data discount campaigns on YouTube consumption using Bayesian time series
- Developed and productionized classification of 100M+ content creators using PCA and LASSO

- Built forecast model for daily reach for thousands of slices using hierarchical time series
- Conducted first deep-dive analysis of female YouTube usage
- Led quantitative analysis for algorithm estimating reach across videos, channels, and countries

## People Analytics Manager, Google

*July 2010 - July 2015*

- Promoted twice (People Analyst → Senior People Analyst → People Analytics Manager), co-founding People Analytics Data Science team and establishing data-driven approaches to workforce planning and organizational effectiveness
- Led social network analysis of company-wide survey, including force-directed graph layouts, predictors of employee PageRank centrality and edge formation, and organizational integration
- Conceptualized and executed restructure of People Analytics survey data, leveraging internal SQL and writing functions in custom R package for consistent, efficient, longitudinal analysis
- Analyzed promotion and transfer activity via survival analysis and random forests
- Created automatic headcount forecast using R Monte Carlo simulation, chaining ARIMA, Cox survival models, and random forests
- Built R package for topic modeling and sentiment analysis, applied to 15+ domains and 350k+ documents
- Identified interviewers and hiring stages most predictive of hiring and performance outcomes
- Created original educational content for Sheets, R, and SQL; delivered 200+ hours of teaching to hundreds of employees; held YouTube lectures for G Suite and Google's data analysis MOOC

## Analyst / Senior Analyst, Beghou Consulting

*June 2008 - July 2010*

- Consulted for pharmaceutical clients on sales force optimization and analytics

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## Education

**M.S., Data, Economics, and Development Policy** | 2020 Massachusetts Institute of Technology

**B.A., Operations Research and Management Science** | 2008 University of California, Berkeley

*Minors: Industrial Engineering & Operations Research, Music*

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## Key Skills & Technologies

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### Programming & Data Science:

- Expert: Python (pandas, NumPy, scikit-learn), R (ggplot2, tidyverse), SQL, Jupyter
- Proficient: JavaScript/TypeScript, React, Stata, Google Apps Script, Linux/shell
- Intermediate: SAS, VBA

### AI & Modern Development:

- LLM programming and prompt engineering
- AI coding agents (Claude Code, GitHub Copilot)
- Automated code generation and testing

### Specialized Expertise:

- Microsimulation modeling and agent-based simulation
- Machine learning for survey data imputation and calibration
- Tax and benefit policy analysis
- Distributional economic impact assessment
- Causal inference and experimental design
- Data visualization and interactive tools
- Open-source software development

### Domain Knowledge:

- Tax policy (income, payroll, wealth, carbon taxation)
  - Benefit programs (SNAP, TANF, SSI, housing assistance)
  - Universal basic income and cash transfer policies
  - Survey methodology and synthetic data generation
  - Poverty and inequality measurement
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## Selected Publications & Research

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### Working Papers

- [What can LLMs tell us about the ETI?](#) With Jason DeBacker. SSRN Working Paper, August 2025.
- [AI Model Policy Impact Forecasts: A Narrative Prompting Approach](#). November 2024.

- [Enhancing Survey Microdata with Administrative Records](#). With Nikhil Woodruff. Presented at National Tax Association meeting, November 2024.

## Book Chapters

- [Mortality, existential risk, and universal basic income](#). In *Death And Anti-Death, Volume 18: Fifty Years After Earth Day*, edited by Charles Tandy. RIA University Press, 2021.

## PolicyEngine Research

- [Marginal tax rates in California's proposed billionaire tax](#). October 2025.
- [Comparing PolicyEngine and official UK poverty rates](#). With Vahid Ahmadi. October 2025.
- [How removing the two-child benefit limit would affect the UK](#). With Vahid Ahmadi. October 2025.
- [How we used Claude Code to choose our DC office](#). With Daphne Hansell. October 2025.
- [Introducing ACA-Calc: Calculate your household's premium tax credits](#). With Daphne Hansell. September 2025.
- [How carbon tax and dividend policies affect UK households](#). With Vahid Ahmadi. September 2025.
- [Enhanced Premium Tax Credits: Analyzing Household Impacts of an Extension Beyond 2025](#). With Daphne Hansell. September 2025.
- [PolicyEngine and NBER sign memorandum of understanding for TAXSIM emulator development](#). With Pavel Makarchuk. September 2025.
- [National Science Foundation awards PolicyEngine \\$300,000 grant](#). August 2025.
- [Analysis of the American Worker Rebate Act of 2025](#). With David Trimmer. August 2025.
- [Enhanced CPS full launch: Comprehensive microdata for policy analysis](#). With Nikhil Woodruff, Ben Ogorek, and Maria Juaristi. August 2025.
- [Analysis of individual income tax provisions in the final reconciliation bill](#). With David Trimmer and Pavel Makarchuk. July 2025.
- [Introducing the OBBBA Household Explorer](#). With Pavel Makarchuk and Elena Cura. July 2025.
- [The 2025 American Family Act](#). With David Trimmer. June 2025.
- [Childcare programmes in PolicyEngine UK](#). With Vahid Ahmadi. June 2025.
- [Manager's Amendment to H.R.1 - The One Big Beautiful Bill Act](#). With Pavel Makarchuk and David Trimmer. May 2025.
- [Montana Reduces Top Income Tax Rate and Expands EITC](#). With David Trimmer. May 2025.
- [The SALT Caucus's Proposed Cap](#). With David Trimmer. May 2025.
- [Ways and Means Committee's SALT Cap](#). With Pavel Makarchuk and David Trimmer. May 2025.

- [Tax changes in effect in April 2025](#). With Nikhil Woodruff. April 2025.
- [What's the SALternative?](#). With Pavel Makarchuk. April 2025.
- [MyFriendBen Launches in North Carolina, Using PolicyEngine API](#). April 2025.
- [HM Treasury pilots PolicyEngine UK for tax-benefit microsimulation](#). With Nikhil Woodruff. March 2025.
- [Extending the Income Tax threshold freeze to 2030](#). With Nikhil Woodruff. March 2025.
- [Preliminary analysis of the Wyden-Smith Child Tax Credit expansion](#). With Pavel Makarchuk. January 2024.
- [Beta-launch: PolicyEngine's enhanced microdata for policy analysis](#). With Nikhil Woodruff. March 2024.
- [Child Tax Credit Provisions of the Tax Relief for American Workers and Families Act](#). March 2024.
- [Individual income tax provisions of President Biden's 2025 Budget](#). With Pavel Makarchuk. March 2024.
- [PolicyEngine launches state income tax modeling nationwide](#). With Pavel Makarchuk. April 2024.
- [Scott Winship's individualized Earned Income Tax Credit proposal](#). 2023.
- [Analysis of the Working Families Tax Cut Act](#). With Nikhil Woodruff. 2023.
- [Analysis of Guaranteed Income for the 21st Century](#). 2023.
- [Massachusetts Governor Maura Healey's FY 2024 Budget Recommendation](#). 2023.
- [The Child Tax Credit in 2023](#). 2023.
- [How would reforms affect cliffs?](#). With Nikhil Woodruff. 2023.
- [Electric vehicle tax credits under current law and the Inflation Reduction Act](#). 2022.

## Substack

- [VAT thresholds, revenues, and the role of counterfactuals](#). August 2025.
- [AI models favor Cuomo over Mamdani on NYC housing production](#). June 2025.
- [What Will the House Ways & Means Committee Propose on Tuesday?](#). May 2025.
- [My 2024 in Code: Personal Projects & AI Tools](#). January 2025.
- [Elon Musk's AI Predicts Americans Will Be \\$800 Richer Under Harris](#). November 2024.

## UBI Center Research (2019-2022)

- **The Inflation Reduction Act discourages electric vehicle buyers from working**. 2022. *Winner of Robert Corrin Prize for Outstanding Research from the Savings and Retirement Foundation*

- **How does targeted cash assistance affect incentives to work?** 2022.
  - **The progressivity of a UK carbon dividend.** With Nikhil Woodruff. 2022.
  - **Carbon dividends as anti-poverty policy.** 2021.
  - **Analysis of Senator Romney's Family Security Act.** 2021.
  - **Revenue and Distributional Impacts of the American Rescue Plan Act.** With Jason DeBacker, Richard W. Evans, and Cody Kallen. 2021.
  - **Distributional analysis of Andrew Yang's Freedom Dividend.** 2019.
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## Conference Presentations & Speaking Engagements

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**National Tax Association (NTA) 117th Annual Conference on Taxation** | November 2024, Detroit, MI - "What Can LLMs Tell Us about the ETI?" With Jason DeBacker - "PolicyEngine's Enhanced Current Population Survey for Tax-Benefit Microsimulation." With Nikhil Woodruff

**Association for Public Policy Analysis and Management (APPAM) Fall Research Conference** | November 2024

**National Tax Association Spring Symposium** | 2024

**BenCon** | 2024

**Open Sustainability Summit** | 2024

**Society of Government Economists Annual Conference** | 2025

**Rules as Code Europe** | March 2025, Paris, France

**University Guest Lectures** | 2024 - UC Berkeley - Northwestern University - George Mason University - University of Toronto

**Rules as Code Demo Day, Beeck Center** | June 2022, Washington, DC - Presented PolicyEngine platform with Nikhil Woodruff

**Basic Income Guarantee (BIG) Conference** | June 2022, Portland, OR

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## Volunteer Leadership & Community Engagement

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### Leadership Council Member, Policy Simulation Library

*September 2020 - Present*

- Lead organization supporting open source products for public policy analysis

## **Synthetic Data Advisory Board Member, Tax Policy Center**

*August 2019 - Present*

- Advise on development of synthetic version of IRS Public Use File for accurate, privacy-safe policy analysis

## **Co-founder and Chair, Ventura County YIMBY**

*August 2019 - September 2022*

- Created the sole pro-housing advocacy group in 800,000-person Ventura County, growing to over 1,000 members

## **California State Coordinator, Citizens' Climate Lobby**

*January 2022 - September 2022*

- Supported eight chapters in Southern California advocating carbon fee and dividend policy

## **Board Member, USBIG**

*November 2021 - April 2022*

- Promoted discussion of basic income guarantee in the United States

## **Organizer, Save the Gas Tax**

*January 2022 - June 2022*

- Formed coalition of 15 organizations advocating to cancel proposed gas tax holiday in California