Matt Delventhal

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Experience

2025- Principal Economist
2023-25 Senior Data Scientist, Cotality
- **Predicted** house-price changes using sentiment analysis
- **Developed** major upgrade of forecasting model for industry standard home price index
- **Designed** Python module to evaluate gen-AI/Large Language Model (LLM) performance
- **Spearheaded** Machine Learning proofs-of-concept projects as member of R&D team

2024- Assistant Professor of the Practice, University of Southern California (part time)
- **Taught** Macroeconomics & Big Data Econometrics for Master's program
- **Developed** app to familiarize students with Real Business Cycles model [Interactive App]

2022-23 Data Scientist, Art of Problem Solving
- **Broke ground** as first dedicated data analyst for a major e-learning product
- **Evaluated impact** of major product changes using difference-in-difference estimation

2018-22 Assistant Professor of Economics, Claremont McKenna College
- **Managed** 6 simultaneous in-depth research projects:
  ▷ **Trained and supervised** 12 research assistants
  ▷ **Recognized** for analysis of remote work: [Publication] [Conference] [Interactive App]
  ▷ **Won** 4 research grants totaling $168k
  ▷ **Media coverage:** LA Times, Time Magazine, The Economist, others
- **Taught** courses: Real Estate; Macroeconomics; Causal inference
- **Presented** research to academic and non-academic audiences
  ▷ 40+ presentations, incl. at Brown U., Natl. Bureau of Economic Research, UC San Diego.

2013-17 Research Assistant, MOVE, UAB
- **Built** database of birth/death stats for 188 countries over 500+ years [Interactive App]
- **Created** method to measure + analyze global demographic transitions [Conference]

2011-12 Human Capital Analyst, ICF International
- **Developed** analysis tool to optimize across 57 IT systems for U.S. Navy.
- **Overhauled** financial reporting for a U.S. Air Force project worth $7 mil/year.

2005-09 Psychological Operations Sergeant, U.S. Army
- **Designed** experiments to pre-test Arabic-language radio and TV ads
- **Interpreted** regular meetings between U.S. and Iraqi officials

2004-05 Business English Teacher, Intl. Communication Institute, Guadalajara, Mexico

Education

Ph.D. in Economics, Universitat Autònoma de Barcelona, 2018
M.A. in Economics, Universitat Autònoma de Barcelona, 2014
B.S. in Economics, University of Missouri-Saint Louis, 2010

Skills

Software: GCP, AWS, SQL, SciPy, Pandas, Polars, LightGBM, OSMnx, Beautiful Soup, QGIS
Methods: Linear + logistic regression, Monte-Carlo sim, DiD estimation, SVM, VAR
Languages: English, Arabic, Spanish, Catalan