# Jacob C. Dichter

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## PROFILE

Data-driven analyst and aspiring data scientist with expertise in predictive modeling, business intelligence (BI) tools, and scalable data pipelines. Proficient in Power BI, SQL, and Python, with a proven track record of building informational dashboards, managing data ecosystems, learning new technologies, and leading research project initiatives.

## EDUCATION

**M.S. Computer Science, Concentration in Data Science,** University of Bridgeport *Bridgeport, CT*
Sept 2024 | GPA: 4.0, Honors Award, 11th national finish in CME Trading Competition, ΥΠΕ Honor Society

- Relevant coursework: Data Mining, Database Design, Python for Data, Deep Learning, Cloud Computing
- *M.S. Thesis*: Developed a machine learning-driven geospatial tract prediction model for Connecticut, integrating SQL, Python, and Power BI to analyze 15+ socioeconomic dimensions to identify socioeconomic hotspots.

**B.S. Political Science, Minor in Statistics**, George Washington University *Washington, D.C.*
May 2019 | GPA: 3.9, Statistics minor, summa cum laude, Pi Sigma Alpha (ΠΣA) Honor Society

- Relevant coursework: Regression Analysis, Time Series Methods, Econometrics, Statistical Computing

## PROJECTS

**"U.S. State Exports Insight Dashboard"** | *SQL Server, Power BI, APIs, Python*

- Designed and deployed a dynamic dashboard using Power BI, SQL Server, and DAX to visualize U.S. trade patterns, generating trade economic insights highlighting trade patterns and key metrics
- Integrated U.S. Census API & state economic data to generate insights highlighting trade patterns across regions.
- Populated SQL Server database with 2.1M-row master table across 100 tables with dynamic SQL queries

**"Modeling Socioeconomic Ascent in Connecticut Census Tracts"** | *Python, SQL, geospatial, Machine Learning*

- Applied machine learning (random forest) in Python to predict socioeconomic ascent in Connecticut census tracts. Compared outputs to traditional regression approaches, showing 14% increase in $R^2$ and generated 2028 forecasts.
- Implemented spatial crosswalk of 884 census tracts to solve modifiable areal problem for inter-year analysis

## EXPERIENCE

**Graduate Teaching Assistant – Python for Data Science**, University of Bridgeport
January 2023 – December 2023 *Bridgeport, CT*

- Supported 150+ students for Professor Sarosh Patel's Python for Data Science (CPSC 442) course
- Mentored students and evaluated programming materials covering datatypes, operators, functions, loops, lambda functions, file processing, map-filter, classes, and doc-tests

**Research Analyst,** U.S.-Saudi Business Council
December 2020 – December 2022 *Washington, D.C.*

- Developed advanced data analysis and visualization techniques to identify emerging market trends, providing market data intelligence across renewable energy, water, construction, trade, finance, and healthcare sectors.
- Implemented engagement analytics workflow to generate membership leads and boosted targeted outreach to members
- Built interactive geospatial dashboard visualizing $11.1 billion U.S. state exports to Saudi Arabia, leveraging HTML and Google Geochart to transform export data into actionable insights for stakeholders

**Economic Research Assistant,** U.S.-Saudi Business Council
June 2019 – December 2020 *Washington, D.C.*

- Identified drivers behind Saudi Arabia's 3% YoY non-oil export growth during the global pandemic by conducting granular commodity value and percent change analysis using Excel and PowerQuery
- Conducted granular survey analysis using Excel, leading to successful outreach campaign to State EDOs and NGOs