Chad Henry

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Portfolio: https://chenryair.github.io/

Data Analyst

Data analyst with 10+ years of experience in public-sector research, spatial analytics, and dashboard development. Skilled in translating messy data into actionable insights using SQL, Python, Tableau, and ArcGIS.

Key Skills

Data Analysis | Data Visualization | Automation |Research | Python | Stata | SQL | Tableau | ArcGIS

Projects

Airbnb Booking Behavior Analysis - Personal   **June 2025**
Conducted a causal analysis to estimate the effect of recent reviews on Airbnb booking likelihood using propensity score matching and logistic regression.
- Used **SQL** to prep ~8,000 Airbnb listings and create a booking measure from availability dates.
- Achieved balanced covariates across groups (SMDs < 0.06) and found that recent reviews increased booking probability by 15.8 percentage points using **Python**.
- Developed an interactive **Tableau** dashboard with filters, maps, and bar charts to communicate results and support user-driven exploration.

Online Retail Sales Dashboard – Personal   **May 2025**
Cleaned over a million transactions from an e-commerce retailer and developed key metrics for a dashboard.
- Used **Python** to remove 3.2k invalid transactions, standardize product descriptions among stock codes, and determine returns and cancellations.
- Built an interactive **Excel** dashboard with PivotTables, slicers (Year/ Month), and KPI cards.
- Discovered that 5 products account for 38% of all returns.

Professional Experience

American Institutes for Research (AIR)   **June 2013 – May 2025**
Researcher, Research Associate, Research Assistant with SEDL (merged with AIR)

Cleaned, synthesized, and analyzed data using SQL, Python, and Stata for clients including state agencies, local governments, and nonprofit organizations.
- **Calculated drive times for 250K pre-K students** to their nearest state-funded pre-K centers using the HERE API for a report that found **a 2% reduction in pre-k participation** for every 10 minutes of distance.
- Analyzed access to advanced coursework for EL and non-EL students for a district with **400k students** and determined **EL students were 32% less likely to attend** advanced courses.
- Developed and delivered **presentations, reports, and data visualizations** for clients and stakeholders.
- **Wrote clear, user-focused technical documentation** for internal teams, external clients, and non-technical audiences, improving transparency of analytical methods and tools used.
- **Led the automation of GIS workflows** using Python and ArcPy, reducing manual effort in application development by over 50%.
- **Reduced online hosting costs by 30%** through effective account management and automated cleanup scripts for AIR's ArcGIS Online account.
- **Created and implemented quality control processes** for code, documentation, and deliverables to improve accuracy and consistency across projects.

Education

Master of Science (MS), Epidemiology
University of Pittsburgh, Pittsburgh, PA

Bachelor of Science (BS), Psychology
University of Pittsburgh, Pittsburgh, PA