

Ray Pomponio

Pittsburgh, PA

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 [GitHub](#) •  [Google Scholar](#) •  [LinkedIn](#)

OBJECTIVE: To contribute expertise in data science to drive innovation in public health research

EDUCATION:

University of Colorado - Anschutz Medical Campus, Denver, CO

Master of Biostatistics

May 2023

Cumulative GPA: 4.0 / 4.0

Honors: Marvin Porter Award (selected among departmental master's students for exceptional academic achievement)

Thesis: *Mistaken identities lead to missed opportunities: Testing for mean differences in partially matched data* (available on [arXiv.org](#))

Coursework: Machine Learning, Statistical Theory I & II, Advanced Data Analysis, Model Selection, Applied Survival and Longitudinal Data Analysis, Epidemiology

University of Pennsylvania - The Wharton School, Philadelphia, PA

Bachelor of Science in Economics (Statistics concentration)

May 2018

Cumulative GPA: 3.7 / 4.0

Honors: Magna Cum Laude, Dean's List (2015, 2017)

Relevant Coursework: Relational Databases for Business (SQL), Predictive Analytics, Applied Probability Models in Marketing

RELEVANT EXPERIENCE:

New Vaccine Surveillance Network, Pittsburgh, PA

May 2024 - Present

Data Scientist

- Support public health surveillance study of vaccine effectiveness, collaborating with seven hospital sites under CDC to clean, process, and manage data for >5k annual enrollees
- Analyze and model epidemiology of respiratory viruses in children, including SARS-CoV-2, Influenza, and RSV

Colorado School of Public Health, Aurora, CO

August 2021 - December 2023

Graduate Research Assistant

- Analyzed and reported results for ten scientific collaborations with principal investigators in pulmonary medicine and transplantation science, resulting in five published journal articles
- Organized and managed complex datasets using electronic health records (EHR), national registry data, and insurance claims, effectively curating millions of records for analysis
- Designed interactive visualizations and reporting tools for active protocols during recruitment
- Developed and maintained code base for statistical computing pipelines in R, SAS, and python

Center for Biomedical Image Computing, Philadelphia, PA

March 2018 - August 2020

Neuroimaging Data Analyst

- Developed new quantitative method for pooling neuroimaging data from studies focused on Alzheimer's disease and cognitive impairment, maintained python package (on [GitHub](#))
- Created systems for MRI data monitoring and management, communicated with external team of physician scientists, leading to five published journal articles on neuroscientific discoveries

Independent Consulting on Upwork, Pittsburgh, PA

August 2023 - Present

Data Science Consultant

- Negotiated, managed, and delivered on freelance contracts for data science consulting projects
- Completed work for five clients totaling over 250 billed hours, requiring analyses across industries including biotech, ecommerce, and sportsbetting analytics

Colorado School of Public Health, Denver, CO

Fall 2023

Teaching Assistant

- Developed assignment solutions for graduate biostatistics course on survival and longitudinal data analysis, including lessons on covariance structures and hazard functions
- Provided semester-long, weekly guided instruction for students using the R statistical programming language, received overall mean teaching quality of 4.8 / 5.0

Wharton Customer Analytics Initiative, Philadelphia, PA

Fall 2017

Data Analyst Intern

- Quantified customer value creation for ecommerce retailer specializing in hair coloring products
- Integrated probabilistic model of lifetime value (CLV) to predict customer churn and purchasing

LEADERSHIP:

- Student representative, Department of Biostatistics and Informatics (Colorado) 2021 - 2023
- Maintainer, python package: <https://github.com/rpomponio/neuroHarmonize> 2020 - Present

PROGRAMMING LANGUAGES: R, SAS, Python, Unix Bash

SELECTED SCIENTIFIC PUBLICATIONS:

- *Analgesia and Sedation Use During Noninvasive Ventilation for Acute Respiratory Failure*, Critical Care Medicine, **Co-author** (March 2024)
- *Prevalence of Alcohol Use Characterized by Phosphatidylethanol in Patients with Respiratory Failure Before and During the COVID-19 Pandemic*, CHEST Critical Care, **Second author** (January 2024)
- *Extraneous Load, Patient Census, and Patient Acuity Correlate With Cognitive Load During ICU Rounds*, CHEST Critical Care, **Co-author** (January 2024)
- *Impact of the COVID-19 pandemic on chronic disease management and patient reported outcomes in patients with pulmonary hypertension: The Pulmonary Hypertension Association Registry*, Pulmonary Circulation, **Co-author** (April 2023)
- *Association of Intensive vs Standard Blood Pressure Control with Magnetic Resonance Imaging Biomarkers of Alzheimer Disease: Secondary Analysis of the SPRINT MIND Randomized Trial*, JAMA Neurology, **Third author** (March 2021)
- *The Brain Chart of Aging: Machine-learning analytics reveals links between brain aging, white matter disease, amyloid burden, and cognition in the iSTAGING consortium*, Alzheimer's & Dementia, **Second author** (September 2020)
- *Two distinct neuroanatomical subtypes of schizophrenia revealed using machine learning*, Brain, **Co-author** (March 2020)
- *Harmonization of large MRI datasets for the analysis of brain imaging patterns throughout the lifespan*, Neuroimage, **First author** (March 2020)

SELECTED SCIENTIFIC PRESENTATIONS:

- *Diffusion Capacity and Six-Minute Walk Test in Lung Transplant Recipients as Tools to Assess Chronic Lung Allograft Dysfunction*, ISHLT Denver (2023)
- *Modeling COVID-19 disruptions in longitudinal health registry data*, SDSS Pittsburgh (2022)