ROSE CONTI PORTA

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EDUCATION

UNIVERSITY OF MASSACHUSETTS AMHERST Amherst, MA
Department of Mathematics M.S. in Statistics Expected May 2024
Cumulative GPA: 4.0/4.0
Relevant Coursework: Regression Modeling, Categorical Data Analysis, Causal Inference, Statistical Computing, Mathematical Statistics I and II, Bayesian Statistics, Statistical Methods for Data Science, Statistical Consulting

SMITH COLLEGE Northampton, MA
Major: Statistical & Data Sciences | **Concentration:** Community Engagement & Social Change B.A. Spring 2023
Cumulative GPA: 3.99/4.0
Relevant Coursework: Communicating with Data, Programming with Data Structures, Linear Algebra, Probability, Mathematical Statistics, Multivariable Calculus, Discrete Math, Advanced Programming in R, Data Ethnography
Skills: R (tidyverse, Shiny), Python, Java, SQL, Mathematica, Data Wrapper, GitHub, data manipulation, data visualization, data analysis, data communication, Google Sheets, Google Colaboratory and Jupyter Notebook, project management, LaTeX

WORK EXPERIENCE

Smith College, Jandon Center for Community Engagement Northampton, MA
Summer Intern Summer 2023
- Compiled publicly available database of over 150 activist memoirs as a resource for students and faculty at Smith College through using R to web-scrape info from online best-sellers lists (https://scholarworks.smith.edu/dds_data/16/).
- Cleaned and visualized data to summarize and convey the Jandon Center's impact for the 2022-23 annual report.
- Transferred archival data to a digital cloud-based platform in order to preserve and organize this info to facilitate research.

Women's Brick Initiative (WBI) Mercer Island, WA
Data Analysis Intern | github.com/rporta23/WBI Summer 2022
- Conducted a series of research projects analyzing diversity and representation within LEGO Minifigures.
- Collaboratively wrote 20 short blog-style articles to convey research findings to the public through the WBI website.
- Used R for web scraping, data wrangling, and data visualization, and GitHub for code collaboration.

DSC-WAV: NSF Funded Workforce Development Grant through Smith College Northampton, MA
Data Science Intern | https://dsc-wav.github.io/www/projects.html Fall 2021-Spring 2022
- Built an interactive map dashboard which visualizes the story of the impact of highway I-91 being built through Springfield, MA on the communities it divided through historical map images and visualization of racial demographic data.
- Collaborated with a team of six students advised by a faculty mentor and partnered with New England Public Media.
- Employed Leaflet and R Shiny to develop the dashboard and GitHub to work collaboratively according to a Scrum workflow.

B.I.G. Summer Research Program, Institute for Quantitative & Computational Biosciences, UCLA Los Angeles, CA
Research Assistant | https://qcb.ucla.edu/big-summer/big2021/#toggle-id-47 Summer 2021
- Detected cell type interaction eQTL effects from bulk RNA-seq data using computational methods under Dr. Pasaniuc.
- Authored an abstract and delivered a 5-minute presentation to communicate research findings.

STRIDE Scholar, Department of Statistical and Data Sciences, Smith College Northampton, MA
Research Assistant Fall 2019-Spring 2021
- Edited introductory data science textbook *Modern Data Science with R* by Dr. Benjamin S. Baumer, *et al.*
- Contributed to the development of an R package used to import data from Wikipedia into R.

PROJECTS

Predicting Auto Insurance Claim Costs Using Historical Claim Data University of Massachusetts Amherst
Travelers Analytics Case Competition 2023 Fall 2023
- Built an ensemble Machine Learning Model to predict claim costs using Python.
- Assessed contribution of each feature using feature importance plots and SHAP Beeswarm plots.
- Communicated the business impact of our findings via a presentation to the Travelers team.

Using Simulation to Assess Strategy Effectiveness in UNO University of Massachusetts Amherst
github.com/rporta23/draw4 Spring 2023
- Developed a Python algorithm to simulate the popular card game UNO.
- Conducted Z-tests to assess effectiveness of four different strategies as compared to a random strategy.
- Found that several of the strategies were effective at increasing winning probability, although the most effective only increased chances of winning by at most a couple of percentage points.

Analysis of Access to Emergency Funds in Sub-Saharan Countries: A Human-Rights Based Approach Smith College
Sponsored by Women at the Table | https://github.com/sds-capstone/2022-09-proj7-women-at-table Fall 2022

- Trained a Decision Tree Classifier Machine Learning model to predict whether an individual has access to emergency funds with 68% accuracy utilizing demographic and financial data sourced from The World Bank's 2017 Global Findex Database.
- Implemented de-biasing techniques and fairness metrics to assess and improve fairness of the model based on gender.
- Documented a complete and detailed analysis in a Google Colab notebook structured as an educational resource for more ethical machine learning including full explanations of each step of the analysis oriented toward a non-technical audience.

Trends in Students Studying Early Childhood Education in The Pioneer Valley, MA Smith College
In partnership with Community Action Pioneer Valley Head Start and Early Learning Programs Fall 2022

- Collected and analyzed data on the numbers and demographics of students studying Early Childhood Education (ECE) from post-secondary institutions within the Pioneer Valley, MA.
- Integrated data from IPEDS, the Census Bureau Household Pulse Survey, and the Bureau of Labor Statistics in order to contextualize the survey data into the larger story of the ECE labor shortage and the impacts of the pandemic on the same.
- Summarized findings into a report for Community Action Pioneer Valley Head Start and Early Learning Programs in order to inform their funding plans for the upcoming funding cycle.

Sex Differences in Depression and Sleep Disturbance as Inter-Related Risk Factors of Diabetes Smith College
Published in *Frontiers in Clinical Diabetes and Healthcare* | https://doi.org/10.3389/fcdhc.2022.914451 Spring 2020-Summer 2023

- Used multiple logistic regression and publicly available U.S. census data from IPUMS NHIS to analyze depression and sleep duration as inter-related predictors of diabetes.
- Report received **first place** in Undergraduate Statistics Class Project Competition (USCLAP) Intermediate Statistics Division.
- Presented at the Electronic Undergraduate Statistics Research Conference (eUSR) Fall 2020: bit.ly/3Rv4Nrc

censusviz R package Smith College
github.com/rporta23/censusviz Spring 2022

- Built an R package which provides an interface for exploring and visualizing historical racial demographic census data (1950-2020) sourced from IPUMS for any region in the United States (by county).
- Devised functionality for visualizing the data on leaflet maps and for accessing the data in an accessible, tidy format such that the user can then create their own visualizations.

AWARDS AND HONORS

Kathleen Bostwick Boyden Prize for Excellence in Community Engagement Smith College, May 2023
Each year, this prize goes to a graduating senior for stellar leadership and commitment to community engagement.
Inducted into Mu Sigma Rho (National Honor Society for Statistics) Smith College, May 2023
American Statistical Association Five College DataFest First Place Winner Smith College, April 2023
DataFest is a nationally-coordinated undergraduate competition in which teams of students work over a weekend to extract insight from a rich and complex data set. (https://www.science.smith.edu/datafest/about/)
Community Engagement Award Smith College Impact Awards, April 2023
Recognizes a long-term or consistent student-led effort to engage the community and have an impact beyond Smith College.

LEADERSHIP EXPERIENCE

Chair of Smith College Community Service Organization, 2022-2023 Academic Year

- Supported the functioning of events and programming through management of CSO Core and active integration into the Jandon Center for Community Engagement staff team.
- Managed tracking of data for events and initiatives including attendance, date, time, and location using Salesforce.
- Organized CSO events to build community among Smith students and to connect students with the broader community.

Chair of House Representatives, Smith College Community Service Organization, 2021-2022 Academic Year

- Organized biweekly meetings to plan student-led community engagement projects.
- Lead and coordinated a project for students to make no-sew fleece blankets to donate to folks in need. Donated 10 blankets to DIAL/SELF—a local organization that provides resources to youth at risk of homelessness.

American Red Cross Volunteer, Disability Integration, Summer 2022

- Compiled a resource guide of 25 organizations that provide services for folks with disabilities within the Eastern NY Region and distributed it to be readily available in emergency shelters that pop up in response to natural disasters.
- Reached out to organizations compiled to collaborate and meet the needs of folks with disabilities during natural disasters.
- Contributed to creating bins of resources to address immediate needs of folks with disabilities to be available in pop-up shelters; bins contained supplies such as fidget toys, noise-canceling headphones, weighted blankets, and specialized utensils.