

# ALEX BASS

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## EDUCATION

### University of Virginia

Master of Science: Data Science

Expected Apr 2023

Charlottesville, VA

### Brigham Young University

Bachelor of Arts: Computational Political Science

*Thesis: Political Message Detection and Likeability in Films (n=1000 survey)*

Apr 2020

Provo, UT

## EXPERIENCE

### Dynata

Data Scientist

Aug 2022-Present

Herndon, VA

### Morning Consult

Senior Data Analyst

Nov 2021-Aug 2022

Washington, D.C.

- Over 300+ requests, pulled data from API or large database into R, wrangled data using R, and output figures and tables
- In conjunction with other data scientists on a large project, developed and performed statistical tests on time series data in 17 surveys of 5 countries in over 200 tables
- Led project to build a Python Web Bot (Selenium) to automate generation of test cases in surveys, contributed this to data science code base (used by 60+ data scientists), saving company \$10,000s in time and errors

### Echelon Insights

Research Analyst

April 2020-Nov 2021

Alexandria, VA

- Led in modeling projects predicting election turnout for entire U.S. in 2022, phone response rates, etc.
- Wrangled, cleaned, weighted, or made presentations for 60+ survey datasets with R, SQL, and AWS
- Using R Shiny, built a codeless-crosstab tool for company's research team

### Center for Elections and Democracy

Undergraduate Research Fellow

Dec 2018-April 2020

Provo, UT

- Designed and executed multiple survey experiments in original research projects
- Mentored 60+ students in solving econometrics problems in weekly office hours
- Visualized data using R creating 50+ informative figures for the AFS official report, news outlets, and professor's projects

## PERSONAL PORTFOLIO PROJECTS

### Bayesian County-Level School Shooting Analysis

August 2022

- Compared and estimated several Bayesian Regression models with PYMC3 in Python. Ultimately, used hierarchical negative binomial model to predict shootings and make inferences about gun laws

### Weekly COVID Email Update

November 2021

- Fully automated workflow (Github Actions) taking latest CDC data, transforming into visualizations, and sending informative email every Saturday morning to subscribers made in R
- encrypted all API tokens via custom encryption (R package Sodium) + github environment variables so repository can be publicly viewable
- Each subscriber receives national data and state-level data customizable to their home state

### US 2020 Election Model

November 2020

- Created visualization dashboard with plotly displaying daily results of statistical model
- Generated 1000 simulations daily of election winner based on a probabilities from model for each state
- Modeled and adjusted for survey error using fixed effects regression