

# ALEX BASS

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## EDUCATION

### University of Virginia

Charlottesville, VA

Master of Science: Data Science

*Internet Archive Sponsored Capstone: [Entity Resolution: Wikipedia Citations to Internet Archive API](#)*

### Brigham Young University

Provo, UT

Bachelor of Arts: Political Science

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

## SKILLS

**Languages and Tools** - *proficient*: Python, R, Bash *intermediate*: Spark, SQL, Tensorflow/Keras, Git, Docker

**Selected Coursework** - Deep Learning, Bayesian Machine Learning, Big Data Systems with Spark, Linear Models for Data Science, Statistical Learning, Data Engineering, Linear Algebra, Econometrics I & II, Data Visualization, Programming in Python

## EXPERIENCE

### Dynata

Aug 2022-Present

*Data Scientist, Ad Solutions*

Herndon, VA

- Delivered 30+ advanced analytical studies (MTA, drivers analysis, diff-in-diff) to high profile clients including 15+ to marketing teams at **Google and Meta**
- Built diff-in-diff and multi-touch attribution model codebase in Python(OOP) for Ad Data Science Team. This codebase has **saved 100+ hours and brought over in \$2 million in revenue to date**

### Morning Consult

Nov 2021-Aug 2022

*Senior Data Analyst*

Washington, D.C.

- **Developed and automated wave-over-wave statistical tests on time series data** in 17 tracker surveys of 5 countries
- 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)
- Over 300+ requests, pulled data from API or large database into R, wrangled data using R, and output figures and tables

### Echelon Insights

April 2020-Nov 2021

*Research Analyst*

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-crossstab tool for company's research team

### Center for Elections and Democracy

Dec 2018-April 2020

*Undergraduate Research Fellow*

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 **hierarchal negative binomial model** to predict shootings and make inferences about gun laws

### [CNN Classification of Urban Sounds](#)

December 2022

- Extracted features such as MFCC, Chromagram, Spectral Contrast from 8000+ audio clips using Python
- **Estimated custom CNN model** and other popular CNN architectures (AlexNet, GoogLeNet, etc.) using Tensorflow and Keras
- Full project write-up and code on Github

- Coded a full data-pipeline using **ONLY Apache Spark** (PySpark): wrangling and joining data, EDA, feature engineering, model selection with a grid search (Lasso, Ridge, Naive Bayes, Random Forest, GBT), model evaluation, and full project write-up and analysis