

# Mallory Klostermann

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## EDUCATION

### University of Illinois Urbana-Champaign

Champaign, IL

BSLAS Statistics

### 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** - Python, R, Spark, Bash, Git, Docker, SQL, Tableau, Github Actions, Quarto

**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

- Built diff-in-diff and multi-touch attribution **model codebase** in Python(OOP) for Ad Data Science Team and spec requesting these studies for Research Team. This code base has saved 100+ hours and brought in \$100,000s in revenue.

### Morning Consult

Nov 2021-Aug 2022

*Senior Data Analyst*

Washington, D.C.

- 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
- 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-crosstab 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

### *Predicting AirBnB Bookings with Apache Spark*

December 2022

- 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

### *CNN Classification of Urban Sounds*

December 2022

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

### *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

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## EDUCATION

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University of Illinois at Urbana-Champaign May 2023 BSLAS in Statistics, Minor in Music, Computational Science and Engineering Certificate in Statistics GPA: 3.90 Dean's List: Fall 2018, Spring 2019, Spring 2020, Fall 2020, Spring 2021, Fall 2022, Spring 2022

## WORK EXPERIENCE

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### Undergraduate Research Assistant January 2022 - Present

#### Carl Bernacchi Environmental Plant Physiology Lab, School of Integrative Biology, USDA

Analyze spreadsheets and data visualizations to generate reports of meteorological data from several field site eddy covariance flux towers to ensure proper data collection and equipment maintenance Clean datasets and generate visualizations using R to locate potential errors in data collection, make corresponding corrections to the dataset, and analyze data collected by the lab Use Excel and to correctly format several years of continuously sampled data for submission to the Ameriflux database Assist in employee training, lab maintenance, data collection, and field work at UIUC's Energy Farm and SoyFACE facilities

### Senior Desk Clerk / Desk Clerk.....March 2019 - December 2021

Allen Hall Front Desk, University of Illinois Housing Received training in peer supervision, leadership, and effective management in a diverse work environment Trained a team of 20+ employees in customer service, daily protocol, emergency procedures, and work-related computer programs through several days of interactive presentations Presented monthly meetings, coordinated scheduling, assisted in staffing, and completed managerial duties Collaborated with a team of 13 paraprofessional staff to provide a cohesive, enriching living environment for more than 600 residents

## PROJECTS & VOLUNTEER WORK

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### R Shiny Project - COVID Dashboard.....Spring 2022

Statistics Programming Methods Generated an interactive R Shiny Application to display COVID cases among different subgroups over time Implemented reactive expressions, several R packages (ggplot2, dplyr, lubridate, etc.), and R Markdown

### Android Application.....Spring 2022

Intro to Computer Science I Developed a basic Android application in Java that allowed users to search for restaurants in the area Implemented server/client interactions, user interface components, search algorithms, JSON encoding, etc.

### Image Mosaic.....Fall 2021

Data Science Discovery Used Python (scikit-image, NumPy) to develop an algorithm that analyzed thousands of images to generate a mosaic of a single selected image

### Statistics Tutoring.....Fall 2022

Urbana Connections Center

### Hip Hop XPress.....2020

Community Outreach & Education Worked with a team of musicians, engineers, and architects to design and build a traveling music studio for middle and high school students

## SKILLS

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R, Python, SAS, SQL, regression modeling, statistical inference, stochastic processes, version control (Git) Problem solving, leadership, initiative, communication, interpersonal and presentational skills