

# Marium Tapal

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## EDUCATION

### SMITH COLLEGE

B.A. in Mathematics & Statistical and Data Sciences

Northampton, MA  
Aug'18 – May'22

- GPA: 3.97/4.00
- Awards: Cum Laude Honors, Phi Beta Kappa, Mu Sigma Rho, Dean's List 2018-2021
- Coursework: Adv Prog in R, Bayesian Analysis, Probability, Mathematical Statistics, Modeling for ML, Visual Analytics, Multiple Regression, Stats in Education, Linear Algebra, Real Analysis, Complex Analysis, Advanced Calculus
- Technical Skills: Advanced: R, Git/GitHub, MS Products; Experience with: Python, SQL, LaTeX, HTML/CSS, Tableau
- Languages: English (Fluent), German (Intermediate), Urdu (Native), Gujarati (Native)

## TECHNICAL EXPERIENCE & PROJECTS

### SMITH COLLEGE STATISTICAL AND DATA SCIENCES

**Data and Teaching Assistant**, Spinelli Center for Quantitative Learning

Northampton, MA  
Sep'21 – May'22

- Conducted 4 open hours per week as a general statistics and data science tutor.
- Supported >100 students through data science labs and projects in the Introductory Data Science and Statistics courses.

**Data Analyst**, Baumer Lab

Jan'20 – May'22

- Built an R package that provides tools to load U.S. political election data using the ETL framework.
- Published R package {fec16} containing 2016 election data on CRAN with >11000 downloads. [github.com/baumer-lab/fec16](https://github.com/baumer-lab/fec16)
- Presented research at the Women in Statistical and Data Sciences and the eUSR conferences.

**Summer Undergraduate Research Fellowship**, Tinker Lab

May'21 – July'21

- Spearheaded production of the Aligned Hierarchies {repytah} Python package for distribution via PyPI and Anaconda; updated 8 functions and wrote >10000 lines of code. [github.com/smith-tinkerlab/repytah](https://github.com/smith-tinkerlab/repytah)
- Collaborated with a team of 6 people to build supporting website and write paper for journal submission.

**Data Science Intern**, Prof. Albert Y. Kim

Jun'20 – Jul'20

- Updated the {fivethirtyeight} R package to host large datasets via a drat repository which boosted downloads by >40% in the first month of release by closing 4 major enhancements and issues. [github.com/rudeboybert/fivethirtyeight](https://github.com/rudeboybert/fivethirtyeight)
- Enhanced reproducibility of the ModernDive textbook by contributing to 5 issues; revamped associated website and package. [github.com/moderndive/ModernDive\\_book](https://github.com/moderndive/ModernDive_book)

### FEDERAL RESERVE BANK OF CLEVELAND

**Capstone Project**

Remote  
Sep'21 – Dec'21

- Automated the collection and cleaning of Twitter data of 5 financial institutions using the Twitter API and R.
- Performed bigram sentiment, regression, and changepoint analysis, documented code, and wrote 15 page report for client.

### FINEPRINT DATA

**Data Science Intern**

Remote  
Jan'21 – Feb'21

- Investigated political investment data and explored 10+ factors that influence trading decisions.
- Translated code from Stata into R, built over 150 statistical models, and consolidated 5 directions for future research.

## PROJECTS

- Automated Bayesian Simple Normal Regression: generate a fully customizable R Markdown report with 1 line of code. [github.com/mariumtapal/bayes-regression-report](https://github.com/mariumtapal/bayes-regression-report)
- Personal Website created using the {blogdown} R package, Hugo, and the Goa theme. [mariumtapal.rbind.io](https://mariumtapal.rbind.io)
- Marium Bakes - a baking recipe website made using R Markdown, HTML, and CSS. [mariumtapal.github.io/marium-bakes](https://mariumtapal.github.io/marium-bakes)
- Shiny App exploring NYC Civilian Complaints about the NYPD. [marium.shinyapps.io/sds235-final-project/](https://marium.shinyapps.io/sds235-final-project/)
- 15-minute activity teaching classification in multimodal memes. [github.com/mariumtapal/hateful-memes-paper](https://github.com/mariumtapal/hateful-memes-paper)

## OTHER EXPERIENCE

### SMITHIES IN STATISTICAL AND DATA SCIENCES

**Vice President & Data Mentor**

Northampton, MA  
Sep'19 – May'22

- Led over 100 organization members, create community, and arrange data science themed events.
- Hosted R Markdown and Git workshops, teas, panels, and Data Science Day for >75 attendees.