

# Natalia Morales

Saint Paul, MN / USA | +1 612 490 4642 | [nmorale1@macalester.edu](mailto:nmorale1@macalester.edu) | [LinkedIn](#) | [Portfolio](#)

## EDUCATION

### MACALESTER COLLEGE | SAINT PAUL, MN / USA

*Data Science Major/Political Science Major*

**Awards:** UWC Davis Scholar, Chuck Green Fellow, Kofi Annan Scholarship, Dean's List

**Study Abroad:** Leiden University College The Hague

**Relevant coursework:** Statistical Machine Learning, OOP & Abstraction, Introduction to Database Management Systems, Linear Algebra, Empirical Research Methods, Data-Driven Governance, Nuclear Energy Security Studies, CAAC and CRSV as a tactic of war, Literary Publishing, Geography of World Urbanization, Urban Politics of Latin America, Political Economy of Development, Anticorruption Public Policy Analysis

*Bachelor of Arts Expected May 2026*

*3.61 GPA*

## WORK EXPERIENCE

### MAYOR JACOB FREY CAMPAIGN | *Campaign Fellow*

*September - November 2025*

- Coordinated logistics for 5+ campaign events (Meet & Greets and rallies), supporting smooth execution and attendee engagement.
- Canvassed 2000+ households and completed 700+ voter contacts via door knocking and phone banking, recording responses and follow-up needs in the campaign system.
- Maintained and analyzed voter contact data for 2000+ records and interactions, tracking outreach metrics and updating databases to guide targeting and follow-up strategy.

### COPAL MN | CHUCK GREEN FELLOW

*May - July 2025*

- Co-authored and helped present two project proposals that contributed to securing \$40,000 in donor and grant funding.
- Audited and cleaned data from 100+ grant applications, updating records in EveryAction to improve database accuracy.
- Designed and launched a Google Sites webpage to showcase a key organizational project.
- Interviewed 30+ staff and community members and transformed their stories into data-informed narratives aligned with organizational metrics.

### MACALESTER COLLEGE POLITICAL SCIENCE DEPARTMENT | *Office Assistant*

*September 2025 - Present*

- Organize and assist 5+ campus-wide events per semester with setup, catering, designing, and distributing publicity.
- Collect information from 50+ majors and minors through forms and emails, and organize them through spreadsheets and boards.

### MACALESTER COLLEGE FACILITIES SERVICES | *Office Assistant*

*September 2022 – Present*

- Provide customer service to 300+ customers by phone, email, or in person to provide information.
- Follow detailed directions to complete daily paperwork and computer data entry, including 5+ daily van reservations, 20+ master keys access, and 10+ invoices.
- Complete clerical tasks such as developing, filing, and distributing physical and electronic mail to 20+ employees in the office.

### MACALESTER COLLEGE | *Reservations Assistant*

*Summer 2023, 2024, and 2025*

- Booked and organized 50+ events per term on campus through EMS Software.
- A/V assistance for events such as conferences, summer camps, and keynote speakers with 200+ attendees.
- Maintained and organized key and card access records for 500+ visitors using Excel spreadsheets, ensuring accurate data entry and efficient tracking.

## PROJECTS

### SENIOR THESIS | *Economic Pessimism and Attitudes Toward Migrants in the MENA Region*

*Sep - Dec 2025*

- Cleaned and organized Arab Barometer Wave VIII survey data from 15,000 respondents in R, and created analysis-ready variables on economic perceptions and Foreign Domestic Workers' rights
- Performed an ordinal regression model and used a process-tracing framework to probe the plausibility of causation.
- Summarized public opinion patterns with 10 visuals and short memos to translate findings for non-technical audiences.

### SENIOR THESIS | *MET: Visualizing High Fashion*

*Nov - Dec 2025*

- Built an interactive D3 scrollytelling site analyzing the Met Costume Institute collection of 300k+ records, including a country-level bubble map, materials over time, and a designer diversity narrative through animated charts.
- Pulled and displayed object images via an API, and implemented responsive, interactive graphics using D3 + SVG with custom HTML/CSS layouts.
- Applied network analysis and centrality metrics to examine which designers and fashion houses receive credit, highlighting patterns of attribution across the collection.

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## STATISTICAL MODELING | *Feature-Based Clustering of Madonna's Billboard Hits Using PCA and Hierarchical Methods*

- Analyzed 48 Madonna songs from the Billboard Top 100 using hierarchical clustering on 11 Spotify audio features; identified 7 distinct musical clusters capturing variations in danceability, energy, acousticness, and valence.
- Applied PCA to reduce dimensionality; found that the first 2 principal components explained ~36% of total variance, highlighting tempo and valence as key contributors to song popularity.
- Created and interpreted heatmaps, dendrograms, and PCA loadings plots to uncover stylistic groupings, including high-energy dance tracks and theatrical outliers forming singleton clusters.

## LLM ANALYSIS | *Decoding Cult Classics: What Separates the Films That Stick?*

- Built an interactive Shiny app that classifies films as slow-burn vs. mainstream using four “cult-trajectory” metrics and ratings-over-time visualizations
- Created a cult-classifier outcome by querying an LLM via the OpenAI API, aggregating responses, and validating results against a manually labeled sample of 50 randomly selected films.
- Trained and evaluated multiple parametric and non-parametric models with out-of-sample validation, tuned a final ensemble, and generated predictions for which recent films are likely to become future cult classics.

## SHINY APP DEVELOPMENT | *Deforestation and political shifts in Brazil (2000–2023)*

- Built an interactive Shiny App using shapefiles at national, state, and municipal levels to analyze Brazil’s tree cover loss (2000–2023) alongside political shifts.
- Created a custom dataset of Brazilian presidents and political leanings; integrated it into an interactive plot linking annual deforestation trends to presidential administrations.
- Developed dynamic maps and time-series visualizations, including a year-selectable tree cover map (2000, 2010, 2020) and rolling-average loss plots by state.

## EMPIRICAL RESEARCH | *Perceived Suitability of Democracy in Jordan*

- Examined the strongest factors affecting a person’s opinion on the suitability of democracy for Jordan.
- Wrangled a dataset of 13219 observations to create and organize the final dataset consisting of 2024 observations.
- Conducted Chi-squared tests and Spearman’s Rank Correlation tests to establish a relationship and its nature between different factors and the suitability of democracy while controlling for age and gender.

## EMPIRICAL RESEARCH | *Women and Policymaking in Guatemala and El Salvador*

- Examined the correlation between increases in female representation post-civil war and the rise in legislation benefiting marginalized groups, using data from Guatemala and El Salvador.

## CONSUMPTION ANALYSIS | *Annual Personal Consumption of Coffee*

- Modeled annual coffee consumption as a two-variable linear function of age and sleep using realistic coefficients; visualized output with 3D plots in Mathematica.
- Applied Riemann sums and integrals to estimate lifetime consumption (12,000 cups from ages 18–70) and calculate average yearly intake (230 cups for ages 30–50).
- Used symbolic and numerical integration to quantify lifetime and period-specific consumption patterns; illustrated accumulation with a concave integral curve and computed average values over defined age intervals.

## PUBLISHING | *Moonsprout: A literary garden*

- Collaborated with a team of 11 to produce and publish a multi-genre literary anthology over a 4-month semester, launched at a public event with ~60 attendees.
- Edited 6 of 11 submissions (including poetry, prose, and novel excerpts) and contributed to final copyediting for the full collection.
- Designed the front and back covers; supported print production and distribution of 100+ physical copies across Macalester College.

## LEADERSHIP & PROFESSIONAL DEVELOPMENT

### MACALESTER ADELANTE! STUDENT ORGANIZATION | President

May 2023 - May 2025

- Led and organized 15 board meetings per semester.
- Coordinate 1-2 cultural events per month, monitor the \$8000+ budget, and delegate tasks to 10 board members.
- Collaborate with other student organizations and external actors, such as academic departments and institutions, to provide students with opportunities like internships and project support.

## SKILLS

**SOFTWARE & TOOLS:** Github | Microsoft Office | Adobe | Google Suite | Canva

**PROGRAMMING LANGUAGES:** R & R Studio | Plotly | Shiny | Javascript | HTML | Python | Java | LaTeX | Mathematica

**LANGUAGES:** English | Spanish | French