

Emarie Rose De La Nuez

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EDUCATION

Tufts University, *Master's in Mathematics*

Concentration in Applied Mathematics

Medford, MA

Sep. 2023 – May 2025

Smith College, *Certificate in Mathematics*

Relevant Coursework: Probability, Advanced Calculus, Real Analysis, Data Ethnography

Northampton, MA

Sep. 2021 – May 2022

Oberlin College, *B.A. in Africana Studies, Minors in Economics and Mathematics*

Relevant Coursework: Linear Optimization, Micro/Macroeconomics, African Economic Development

Oberlin, OH

Aug. 2017 – May 2021

SKILLS

Technical Languages: R, Python, STATA, Matlab, Excel, SQL, and L^AT_EX

Languages: Spanish (Fluent), Italian (Intermediate), Latin (Intermediate)

EXPERIENCE

Metric Geometry and Gerrymandering Group

Research Assistant

Boston, MA

June 2023–Present

- I designed and implemented a data pipeline for loading tabular election data, HTML, and JSON files, and transforming them into Kepler Mapper objects.
- Modeled alternative election systems for Massachusetts in an effort to further the study of gerrymandering and congressional redistricting.

PFAS Exposure Risk in Carceral Facilities in Georgia

Data Analyst

Northampton, MA

September 2021–June 2022

- Implemented geo-spatial data analysis in R to find how many watersheds are contaminated and a source of drinking water.
- Conducted statistical analysis with the Tidyverse package and found that 47 carceral facilities are at risk.
- Submitted findings to the Department of Justice to show exposure is an issue of environmental and medical racism.

Delineations of "whiteness": Black-face Minstrelsy in the 19th and 21st Centuries

Quantitative Researcher

Oberlin, OH

June 2019 – June 2021

- Studied U.S. socio-political delineations of "whiteness" through gendered, expressions of racial appropriation.
- Created an original dataset by using Twitter's A.P.I to data-mine for racist tweets.
- Crafted a literature review to design and implement filtered keyword structure with python's PANDAS.
- Manually assigned 500 tweets with a "keyword" score and used STATA and SPSS to perform statistical analysis to identify potential spike of racist "tweets" during the George Floyd Protests.

Linear Algebra Application: Page Rank Algorithm

Smith College Mathematics Department

Northampton, MA

February 2022–June 2022

- Researched applications of Markov chains and adjacency matrices in the Random Surfer Model.
- Derived a transition probability matrix to prove theoretical properties.

The Mathematics Behind Origami

Smith College Mathematics Department

Northampton, MA

February 2022–June 2022

- Studied the geometrical properties of the Miura-Ori fold and its application to astronautical engineering.
- Received a full-tuition scholarship to Origami NYC and studied folding techniques with Physicist, Robert Lang.

TEACHING EXPERIENCE

Probability

Tufts University

Sep. 2023 – Present

Medford, MA

Calculus II

Tufts University

Sep. 2022 – January 2023

Medford, MA

Linear Algebra

Smith College

January 2022 – May 2022

Northampton, MA

Calculus I

Smith College

September 2021 – January 2020

Northampton, MA

CUSTOMER SERVICE EXPERIENCE

Hostess

May 2022 – Present

Serafina on 77th

New York, NY

- * Adept at utilizing P.O.S systems such as Toast.
- * Completed Server training shifts

Barista

October 2017 – October 2019

Slow Train

Oberlin, OH

- * Developed coffee knowledge through on-site experience of making different styles of drinks.
- * Strong attention to detail through repeated exposure to complicated order and proper cleaning protocols.
- * Refined ability to multi-task through repeated experience of simultaneously taking orders, operating the cash register, and fulfilling orders.
- * Honed team-working skills through ability to communicate and cooperate, which led to excellent execution of assembly line organization during peak hours.

Back-Bar

October 2017 – October 2019

Slow Train

Oberlin, OH

- * Assisted bartenders during high volume hours with any needs they might have such as mixing cocktails to specification and pouring beers.
- * Robust ability to multi-task through repeated experience of simultaneously taking orders, operating the cash register, and fulfilling orders.
- * Became familiarized with bar opening and bar closing procedures such as fully stocking ice bins, preparing fruit and garnishes, and setting up service bars for drink service.
- * Shadowed various bartenders and through a strong willingness to learn, began the process to bartender promotion. This promotion was not completed because of Ohio alcohol serving laws in regards to underage back-bars.

Barista

July 2017 – August 2018

The Bean

New York, NY

- * Adept at utilizing P.O.S systems through strong experience on maintaining the cash-register and other front of house responsibilities.
- * Perfected conversationalist skills which enables me to provide a warm and friendly atmosphere for customers.
- * Enhanced adaptability skills through a myriad of interactions with customers and co-workers from all walks of life.
- * Created a strong foundation in working in high-pressured environments through experience as a full-time employee during the tourist seasons.

ACTIVITIES AND LEADERSHIP

Green EDGE Fund, Student Senate Liason

Oberlin, OH

Oberlin College

September 2019 – May 2021

- * Represented Oberlin student body in institutional discussions of environmental sustainability.
- * Coordinated weekly meetings with student representatives to allocate funds for environmentally sustainable projects.
- * Worked with local businesses to review financial processes and provided accounting knowledge.

Teaching Assistant; Linear Algebra, Calculus II and I

Medford, MA

Tufts University and Smith College

Fall 2021–Present

- * Led 6+ hours of weekly tutoring sessions for 20-25 students.
- * Graded and provided feedback for student assignments.

Peer Advising Leader

August 2019 – December. 2019

Oberlin College

Oberlin, OH

- * Taught a two-credit college course to first-year students.

AWARDS AND SCHOLARSHIPS

Future Leaders Fellowship

Tufts University

One out of sixteen students nominated for a full-tuition scholarship

Fall 2022 – Spring 2024

Mellon Mays Undergraduate Research Fellowship

Oberlin College

One out of five Oberlin students nominated for a national research grant

Spring 2019 – Present

Say Yes to Education National Scholarship

Oberlin College

Full-Tuition Scholarship

Fall 2005 – Spring 2021

Tisch Summer Fellowship

Tufts University

Summer Funding for a full-time position at the MGGG Redistricting Lab

Fall 2005 – Spring 2021

PFAS Exposure Risk in Carceral Facilities within the State of Georgia

Joint Mathematics Meeting, Seattle, WA, 2021

Filling in the Color Line: A Quantitative Look at Practices of white Hegemony

Mellon Mays Undergraduate Fellowship Regional Conference, Grinnell College, October 2019

Filling in the Color Line: A Quantitative Look at Practices of white Hegemony

Mellon Mays Undergraduate Fellowship Regional Conference, Oberlin College, February 2019