

# Ben Rosenberg

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## EDUCATION

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- **Hamline University** Saint Paul, MN  
*Bachelor of Science - Computational Data Science, Minor in Mathematics* August 2022 - May 2024
- **Minneapolis College** Minneapolis, MN  
*Transfer Curriculum - Mathematics* August 2021 - July 2022

## PROFESSIONAL EXPERIENCE

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- **Hamline Oracle** Saint Paul, MN  
*Managing Editor* May 2023 - May 2024  
*Data Journalist & Story Editor* August 2022 - May 2023
  - **Project Management:** Organized and co-led a team of 30 in preparing timely, thoughtful news coverage for a diverse readership
  - **Data Accessibility:** Encouraged transparency by visualizing the University's financial, COVID, and other administrative data only available through personal request or API calls
  - **Writing & Copy Editing:** Produced professional, published writing as both an individual and a member of a closely collaborative team
  - **Automation:** Wrote and maintained software which integrates Google Docs writing and editing workflow with InDesign layout workflow
  - **Payroll Administration:** Prepared and delivered monthly payroll for a 30-person staff
- **Hamline University** Saint Paul, MN  
*Mathematics Tutor* January 2023 - May 2024
  - **Flexibility:** Covered varying tutoring responsibilities for three separate classes: Statistics, Business Analytics, and Elements of Statistical Learning
  - **Lesson Planning:** Prepared lessons to aid specific students with statistical topics ranging from pivot tables to neural networks
- **Magers & Quinn Booksellers** Minneapolis, MN  
*Online Sales Coordinator & Customer Service* April 2021 - August 2023
  - **Automation:** Identified and resolved data-entry inefficiencies with JavaScript-powered tools
  - **Inventory Systems:** Developed a new process to significantly improve the accuracy and speed of tracking store inventory
  - **Logistics:** Coordinated international and domestic shipping of high-value books including continual optimization of security, speed, and VAT
  - **Customer Service:** Provided consistent, friendly service to a high volume of customer inquiries ranging from technical difficulties to book recommendations

## RESEARCH & PROJECTS

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- **Research on mathematical models to predict the motion of swarming locusts:** Applied multiple statistical analyses and developed a novel filtering algorithm to evaluate existing models against a dataset tracking nearly 20,000 locust trajectories. Presented at the National Conference on Undergraduate Research (NCUR). Funded by Hamline University. Tech: R, Python, C++
- **Markov chain-based generative audio processing:** An embedded program for creating novel musical output from limited inputs. Tech: Python, C++
- **"M&M Sorter":** A binary audio classifier with a browser-based GUI. It accepts any audio input but was strictly trained to distinguish between the music of Eminem and Michael McDonald. Tech: JavaScript/P5.js, R, Python, Plotly
- **Browser-based simulation of Jane Jacobs' "Eyes on the Street":** An interactive tool for understanding the interplay of population and neighborhood safety described in *The Death and Life of Great American Cities*

## COMPUTATIONAL SKILLS

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- **Languages:** Python, R, SQL, JavaScript, HTML, CSS, C++, Java
- **Libraries & Runtimes:** Plotly, Shiny, Node.js, D3.js, Scikit, PyTorch, TensorFlow, Keras, Cython
- **Tools:** Tableau, Microsoft Office, Google Workspace, RStudio, MySQL, PostgreSQL
- **Systems:** Git, GitHub, Docker, macOS, Windows, Arduino, Raspberry Pi, Google Colab, Google Sites

## SCHOLARSHIPS

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- William R. Peterson Prize in Journalism - May 2023
- Eliza A. Drew Prize in Music Composition - May 2023
- Hamline Talent Scholarships for Music and Science - August 2022
- Minneapolis College Foundation STEM Scholarship - September 2021

## VOLUNTEER EXPERIENCE

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- **Mathematics Tutor** Minneapolis, MN  
Leading online and in-person lessons for students in high school and college mathematics *August 2018 - Present*
- **Copy Editing** Various / Remote  
Helping peers and students prepare formal writing for school, applications, or publication *August 2016 - Present*

## PERSONAL EXPERIENCE & INTERESTS

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- **Musical Composition & Performance** Various / Remote  
Writing, performing, and recording original music with groups large and small *2013 - Present*
- **Audio Software Development** Various / Remote  
Developing original software for generating, processing, and organizing audio in digital formats *2019 - Present*

## OTHER WORK EXPERIENCE

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- **La Cuchara** Baltimore, MD  
*Support Staff* *August 2018 - March 2020*
  - **Customer Service:** Provided a very high quality of service to a high volume of customers
  - **Event Planning:** Helped to coordinate, prepare, and perform off-site events
  - **Transparency:** Improved transparency of a tip pooling system through data visualization