

Erik Mattson

Mobile: **Censored**

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<https://github.com/ErikTheBlacksmith>

Education and Awards

New Jersey Institute of Technology, Newark, NJ

Expected Graduation December 2024

Bachelor of Science in Applied Statistics and Data Analysis

- Cumulative GPA: 3.966/4.0
- Relevant Coursework: Machine Learning, Time Series Analysis, Regression, Mathematical Modelling, Statistical Methods in Data Science, Stochastic Processes
- Awards: Mathematical Science Scholarship, Ava Simons Huer Scholarship in Math

Sitting for exam P of SOA in May

Experience

New Jersey Institute of Technology, *Mathematics Tutor*. November 2022 – Present

- Provided single to classroom tutoring at the college level in several mathematics courses.
- Communicate difficult concepts in a concise manner
- Give skills and provide feedback for improvement

NJIT, *Undergraduate Research and Innovation Program*. May 2023 – July 2023

- Designed and developed efficient algorithms to determine stochastic processes
- Implemented algorithms in the Julia programming language
- Tested, redesigned, and improved ideas
- Presented findings to a panel and audience

Skills

- Programming languages:
 - Python (NumPy, scikit-learn, pandas, Matplotlib),
 - R (R-Shiny),
 - Julia,
 - Some HTML and C++
- Some SQL
- Data Analysis, Visualization, and Modelling
- Microsoft Office (Excel, Word, PowerPoint, etc.)
- MS Access
- Teaching

Projects

Search Trend Visualization

- Visualizes Google Trends data with no limit on the number of variables
- Python (Pandas)
 - Collect data in batches of 5 through an API
 - Cleans data for transfer to R
- R (R-shiny)
 - R-shiny app provides an interface for variable and time scale input
 - Retrieves data from Python
 - Converts the relative batches into global data
 - Plots, as well as provides the data in csv format for download

AHK Special Character GUI

- Automatically creates a menu for special characters
- Created in Python
- Reads from a text file and creates an AutoHotkey script
- Customizable layout

Physics Clustering

- Creation of a fun idea to cluster data using a physics simulation in Python
- Establishes a function to determine how similar variables are
- Attaches springs between each variable with parameters dependent on similarity
- Releases them into a discrete-time physics simulation