

SAMUEL CAMERON LOWE

APPLIED MATHEMATICIAN AND SOFTWARE ENGINEER WITH GIS ANALYSIS AND ML MODELING EXPERIENCE. WORK RECOGNIZED BY NPR AND THE NEW YORK TIMES.

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EDUCATION

Northeastern University – College of Science Boston, MA
Master of Science in Applied Mathematics, Data Science Concentration, Summa Cum Laude May 2025

- **Relevant Coursework:** Algorithms, Machine Learning & Statistical Learning Theory 1 & 2, Probability 1 & 2, Measure Theory, Abstract Algebra 1 & 2
- **GPA:** 3.92/4.0

Northeastern University – Khoury College of Computer Sciences Boston, MA
Bachelor of Science in Computer Science and Mathematics June 2023

- **Relevant Coursework:** Software Development, Computer Systems, Linear Algebra, Partial Differential Equations
- **Activities & Societies:** Math Club (President), Math Education Mentorship Association (Executive Board Member), Game Dev Club, NUPride

TECHNICAL SKILLS

Languages: Python, C#, Rust, Java, SQL, C/C++, TypeScript, Go

Technologies: Django, NumPy, Pandas, GeoPandas, Scikit-Learn, Keras, TensorFlow, Git, FastAPI, Bash, Docker, Kubernetes, Jupyter, LaTeX, Vue.js, React.js, Tableau

Domain Expertise: Data Science, Deep Learning, Data Engineering, Data Cleaning, GIS Analysis, A/B Testing, Queueing Theory, Object-Oriented Programming, Functional Programming, Event-Based Programming, Async Programming

EXPERIENCE

Data Analyst Boston, MA
Center for Strategic Politics Dec. 2024 – Present

- Designed the weighted single transferrable vote algorithm to simulate the outcomes for the [NYC Mayoral Democratic Primary Poll](#), which was featured on the [New York Times](#)
- Cowrote public press releases, conducted statistical poll analysis, and performed geographic information system analysis that has been commissioned by state-level and congressional campaigns around the country

Teaching Assistant Boston, MA
Northeastern University Sept. 2021 – May 2024

- Assisted multiple proof-based mathematics and computer science classes including Number Theory 1, Introduction to Math Reasoning, and Logic and Computation
- Led programming labs in the Lean 3 programming language, held problem solving sessions and office hours for programming and math classes, and assisted grading

Software Engineering Co-op Boston, MA
BitSight Technologies Jan. 2022 – Aug. 2022

- Designed and prototyped Golang microservice to parallelize data processing
- Worked with SQL, Python, and Kubernetes to add features and unit tests to back-end Django database

Back-End Engineer

Generate Product Development

Boston, MA

Jan. 2021 – May 2021

- Worked with a team of two other back-end engineers to integrate Google Maps, RapidSOS, Bluetooth, and MySQL into our Django back-end
- Led several weekly standups to discuss team progress, priorities, and resolve issues

PROJECTS | [SAMLOWE.DEV/PORTFOLIO](https://samlowe.dev/portfolio)

nprcore | [Vue.js](#), [JavaScript](#), [Spotify API](#), [Git](#) | [Repository](#)

- Pair-programmed a website to analyze users' music choices and compare them with NPR's recommended songs, which was then recognized by official NPR Twitter accounts including [All Things Considered](#) and [NPR Interns](#)
- Designed algorithms to calculate a user score, compare it against population data, and rate users' music tastes

Pisa | [Python](#), [Django](#), [Lean4](#), [SQL](#), [JavaScript](#), [HTML](#), [Docker](#) | [Repository](#)

- Built a full-stack proof assignment platform in Django for instructors to design, assign, and automatically grade assignments in the Lean4 programming language
- Features include homework and problem design, viewing and exporting student grades across multiple classes, and code environment with syntax highlighting and server-side automated feedback and grading

Gems in the Rough | [Python](#), [PySide6](#), [Hugging Face](#), [Gemma4](#) | [Repository](#)

- Cross-platform, AI-powered image sorting utility that asks Google Deepmind's Gemma4 artificial intelligence which directories images should be sorted into
- Streams images and AI suggestions to the user in a rescalable window, allowing the user to accept or reject Gemma's suggestions with hotkeys or UI buttons. Accepted images will be moved automatically
- Multi-threading architecture allows multiple AI agents to sort images in advance of the user, providing a quick and seamless user experience

League of Losers | [Python](#), [Jupyter](#), [NumPy](#), [TensorFlow](#), [scikit-learn](#), [Matplotlib](#) | [Writeup](#), [Repository](#)

- Explored a data set of team winrates in League of Legends based on game scoreboard at 10 minutes
- Trained logistic regression, random forest, artificial neural network, linear and quadratic discriminant analysis, k-nearest neighbors, and other classifiers to predict outcomes with over 70% accuracy
- Compiled an extensive writeup detailing data cleaning, dimensionality reduction using singular value decomposition, and contrasted the performance of various models

PaperScraper | [Python](#), [PyTest](#), [Poetry](#), [uv](#), [APIs](#) (Reddit, Imgur, Flickr), [Git](#) | [Writeup](#), [Repository](#)

- Developed a command-line program to allow users to easily download wallpapers from Reddit
- Used asynchronous programming to improve performance when downloading multiple files
- Wrote automated unit tests with PyTest, MagicMocks, VCR.py, GitHub actions