

Shon Shtern

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[Github](#) | [Personal Website](#)

EDUCATION

Columbia University in the City of New York

May 2025

Masters of Science in Computer Science (GPA 3.93)

New York, NY

Relevant Coursework: Analysis of Algorithms, Machine Learning, Computer Vision II, Natural Language Processing, Quantum Computing, Operating Systems, High Performance Machine Learning, Systems Programming.

Honors and Awards: Amazon MS Fellow; Professional Development and Leadership Fellow; Marshal

University of Illinois at Urbana-Champaign

December 2021

Bachelor of Science in Engineering Physics and Mathematics (GPA 3.92)

Champaign, IL

Relevant Coursework: Honors Real Analysis, Honors Abstract Algebra, Probability Theory, Partial Differential Equations, Nonlinear Programming, Database Systems, Algorithms, Data Structures, Honors Linear Algebra, Graduate Microeconomic Theory.

Honors and Awards: DREAM Fellow, Cum Laude in Mathematics with Highest Distinction; Highest Honors in Physics; James Scholar; Chancellor's Scholar.

PROFESSIONAL EXPERIENCE

Goldman Sachs

New York, New York

Global Banking & Markets – Equities Client Technology Summer Intern

June 2025 – August 2025

- Architected and implemented a new internal reporting platform using **React**, **Node.js**, and **Java** to **supersede a decades-old legacy system**, significantly improving performance, usability, and long-term maintainability.
- Designed and refined prompts to fine-tune API-based LLMs across cross-desk ecosystems, increasing response accuracy by **25%**

The GILM Lab

New York, New York

CS Research Assistant

January 2024 – May 2025

- Developed a **Pytorch-based Neural Network** to assess **3800+** materials' complex reflectance properties, enhancing light absorption modeling accuracy by **20%**
- Coauthored two **Mitsuba rendering pipelines** using **C++** to measure fluorescence in objects of varying thickness, absorption, and emission spectra, enhancing accuracy by **10%**
- Contributing author** on a submission in progress for a **major computer science venue**.

The Process, Interaction, and Computing Lab

Champaign, Illinois

CS Research Fellow Intern

June 2023 - December 2023

- Created a visualization tool to analyze **5 million** syntax errors with **Python** and **SQL**, achieving **95% precision** in error detection and evaluation of users' code
- Discovered indicators of logic errors within computer science coding assessments using **Matplotlib** and **SciPy**, finding an increase of **10 edits per compilation**

Illinois Geometry Lab

Champaign, Illinois

Math Research Assistant

January 2020 - May 2020

- Co-developed a **Python** algorithm to calculate the basis of an unexplored mathematical structure and graph its modules
- Presented findings on the modular nature of Steenrod Algebras to 30 researchers in the Mathematics Department to prepare for further work in higher-order algebras

PROJECTS

Music Taste & Happiness [2024](#)

- Worked on a team to develop **neural network** models using **Scikit-Learn**, **Pandas**, and **TensorFlow** to measure the relationship between music taste and mental health levels, achieving an F1 score of .65

Dream City Finder, DevFest [2024](#)

- Collaborated with a team to develop a **KNN** and **linear regression** algorithm using **Python**, **Scikit-Learn**, **HTML**, and **FLASK** to recommend the top 3 cities for the users based on preferences

Sao Paulo Public Transit App [2023](#)

- Designed a Sao Paulo public transportation app using **SQL**, **JavaScript** and **HTML**, enhancing user navigation by displaying the quickest routes to destination
- Incorporated a badge system for frequent app usage, allowing users to earn and display up to 10 badges

Database Chat Server 2023

- Constructed a **TCP** database web server in **C** utilizing the **socket**, **netinet**, and **arpa/inet** libraries
- Implemented functionality to allow clients to search for and receive information from the database

LEADERSHIP

- Girls who Code Facilitator 2022-2023:** Hosted workshops for 34 elementary, middle and high school girls, teaching **data structures** and **OOP** in **Java**. Mentored 20 girls to create **Java/Python** programming projects

TECHNICAL SKILLS

Programming Languages: Python, C, C++, MySQL, Java, JavaScript, HTML, CSS, MIPS

Technologies/Frameworks: Linux, Vim, AWS, Google Cloud, PyTorch, Scikit-Learn, TensorFlow, React, Node.js, Firebase, Pandas, NumPy, Git, MaterialUI, FLASK, Bash, Mitsuba, Microsoft Suite, Adobe Suite