Shon Shtern

ss7007@columbia.edu | New York, NY
https://www.linkedin.com/in/shonshtern/ | https://github.com/kirby509

EDUCATION

Columbia University   Expected Graduation: Fall 2025
Master of Science in Computer Science; Thesis Track (GPA 3.93)   New York, New York
Honors and Awards: Amazon MS Fellow
Relevant Coursework: Machine Learning, Applied Machine Learning, Computer Vision II, NLP, Quantum Computing, System's Programming.

University of Illinois at Urbana-Champaign   August 2017 – December 2021
Bachelor of Science in Engineering Physics and Mathematics (GPA 3.92)   Champaign, Illinois
Certifications: Computing Fundamentals
Honors, Awards and Certificate: DREAM Fellow, Certificate in Computing Fundamentals, Highest Honors in Physics; Cum Laude in Math with Highest Distinction; James Scholar; Chancellor's Scholar; Dean's List.
Relevant Coursework: Database Systems, Algorithms, Data Structures, Nonlinear Programming, Honors Real Analysis.

TECHNICAL SKILLS

Programming Languages: Python, C, C++, MySQL, Java, JavaScript, HTML, CSS, MIPS.
Technologies: AWS, React, Vim, Git, Bash, Linux, Microsoft Suite, Adobe Suite
Frameworks/Libraries: PyTorch, Pandas, Scikit-Learn, TensorFlow, Mitsuba, FLASK, NumPy

PROFESSIONAL EXPERIENCE

The GILM Lab   New York, New York
Research Assistant   January 2024 – Present
- Developed a **Pytorch**-based **Neural Network** to assess **3800+** materials' complex reflectance properties, enhancing light absorption modeling accuracy by **20%**.
- Collaborated on the creation of two **Mitsuba renderers** using **C++** to measure fluorescence in objects of varying thickness, enhancing accuracy by **10%**.

The Process, Interaction, and Computing Lab   Champaign, Illinois
Research Fellow Intern   June 2023 – December 2023
- Scrutinized over **5 million** syntax errors with **Python and SQL**, achieving **95% precision** in syntactical error detection and evaluation.
- Analyzed approaches to debugging surrounding indicators of logic errors using Python's **Matplotlib and SciPy** libraries, **finding an increase from 4 to 14 edits per compilation.**

Illinois Geometry Lab   Champaign, Illinois
Research Assistant   January 2020 - May 2020
- Discovered basis for the Steenrod Algebra order 1 under prime 3 and graphed modules representing the Algebra using **Python** to contribute to unexplored research surrounding prime 3.
- Presented findings regarding modular nature of Steenrod Algebras to 30 researchers in the Mathematics Department to prepare for further work in higher-order Algebras.

PROJECTS

Find Your Dream City, DevFest 2024
- Jointly developed 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 Transportation App 2023
- Designed a public transportation app using **SQL, JavaScript** and **HTML**, enhancing user navigation in Sao Paulo**.**
- Implemented functionality to incentivize app usage by incorporating a badge system, allowing users to earn and display up to 10 badges.

LEADERSHIP

- **Girls who Code Facilitator:** 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.
- **Illinois Smash Bros. Competitor:** Managed finances to ensure the club hosts two large events yearly, attracting national competition. Ranked **best player in the university, top 5 in the state of Illinois** and **top 15 in NYC**.
- **UIUC Chess Ethics Chair:** Hosted educational events and played in national tournaments. **Peak USCF 1809.**