**Shon Shtern**

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**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.**