

# Roma Bhattacharjee

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## EDUCATION & ECs

### PRINCETON UNIVERSITY

B.S.E. STUDENT | CLASS OF 2025 |

GPA UW 3.9/4.0

Princeton, NJ

- ❖ Major: Computer Science (COS)
- ❖ Certificates: Optimization and Quantitative Decision Science, Statistics & Machine Learning, Finance
- ❖ Relevant courses: Adv. Vector Calculus, Adv. Linear Algebra w/ Applications, Algorithms & Data Structures, Fundamentals of Statistics, Adv. Physics (Mechanics), General Physics II, Introductory Logic
- ❖ Lead SWE on The Daily Princetonian Technology Team, member of Princeton Debate Panel, member of Princeton Women in Entrepreneurship

### UNIVERSITY OF CHICAGO

#### MASTERS PROGRAM IN COMPUTER SCIENCE (MPCS)

NON-DEGREE-SEEKING HIGH SCHOOL STUDENT | 2019–2021

Chicago, IL

- ❖ Courses: iOS Application Development (Grade: A); Algorithms (Grade: A); Introduction to Software Engineering (Grade: A)

### UNIVERSITY OF CHICAGO

#### LABORATORY SCHOOLS

HIGH SCHOOL DIPLOMA | CLASS OF 2021 | GPA UW 4.0/4.0

Chicago, IL

- ❖ Awards: Brian Swan award for AT Physics I, Achievement in Computer Science award, Eunice Helmkamp McGuire Excellence in Writing award, Finalist.
- ❖ Executive Board of Student Council (Director of Technology), debating team (Novice), Vice-President of Girl-Up Club, Varsity Volleyball (Co-Captain), Board of Artsfest
- ❖ Relevant courses: AP CS; Computer Architecture; Discrete Math; AI & ML; AT Economics; Linear Algebra/Multivariate Calculus
- ❖ Member of Science, Math (qualified for AIME 2020, 2021), Robotics

## MUSIC

- ❖ Played piano since 4 y/o. Completed all 12 levels of the Achievement in Music (AIM) program.

## APTITUDE & SKILLS

### STANDARDIZED TEST SCORES & AWARDS

SAT 1590/1600 [Aug '20] • ACT 36/36 [Dec '19] • National Merit Scholarship 2021 Finalist: 224/226 • 2021 Semifinalist for U.S. Presidential Scholars Program • SAT Math 2: 800 • SAT Physics: 790

### SOFTWARE SKILL SETS

MacOS • Windows • Linux/Unix • C/C++ • Java • Python • Bash • TypeScript • Swift • React • Node.js • LaTeX • SQL • NumPy + Pandas • MATLAB • R • Fusion360 • Blender • Flask • PyQt5 • PyTorch • AWS • Kafka • InfluxDB • Grafana • Docker

## EXPERIENCE

### D.E. SHAW DISCOVERY FELLOWSHIP [\[link\]](#)

NOMINATED STUDENT | Aug 2022 | New York, NY

- ❖ Selective three-day program for a small group of sophomore-year undergraduate women. Invited to D.E. Shaw's headquarters to learn about the intersection of finance and technology through interactive case studies and seminars.

### CME GROUP [\[link\]](#)

INTERN – PRODUCTION ENGINEERING TEAM | May 2022–Aug 2022 | Chicago, IL

- ❖ Implemented Robot Framework to automate end-to-end execution of MiFID report generation, kicking off a multi-year project to replace existing test framework.
- ❖ This included building an order entry library in Python to communicate with Globex—CME's electronic trading system—via Simple Binary Encoding (SBE).

### STARTUP – STEALTH MODE

SWE – CORE TEAM | May 2022– | Remote

- ❖ Application build-out for a product for the Construction & Engineering Industry.

### ARTIFICIAL INTELLIGENCE FOR 3D DATA – UCHICAGO 3DL [\[link\]](#)

RESEARCH INTERN | June 2022– | Chicago, IL

- ❖ Working with Assistant Prof Rana Hanocka. 3DL works at the intersection of deep learning and 3D, with applications in computer graphics, machine learning, and computer vision. I am developing an extension to the [Text2Mesh](#) project.

### APPLIED AI/ML AT UCHICAGO SAND LAB [\[link\]](#)

SUMMER RESEARCH ASSISTANT | Jun 2021–Aug 2021 | Chicago, IL

- ❖ Worked with Professor Ben Y. Zhao at the University of Chicago [SAND Lab](#) through the Data Science Institute (DSI) Summer Lab program.
- ❖ Conducted research on physical backdoor attacks in computer vision models. Developed automatic graph analysis techniques to uncover viable physical triggers in pre-existing object datasets. Co-first author on [paper](#) submitted to NeurIPS 2022 dataset track.

### COMPUTER-AIDED DIAGNOSIS: UCHICAGO GIGER LAB ML/AI [\[link\]](#)

RESEARCH ASSISTANT | Jun 2020–Jun 2021 | Chicago, IL

- ❖ Worked with Dr. Maryellen Giger, Dr. Karen Drukker, and Ph.D. candidate Lindsay Douglas on project about quantitative radiomic analysis for abbreviated/ultrafast breast MRI. Compared lesion segmentation methods, including convolutional neural networks.
- ❖ First author of research abstract accepted to Optics & Photonics organization SPIE's Medical Imaging Conference, Feb 2021—delivered an [oral presentation](#).

### CITADEL [\[link\]](#)

INTERN – EQUITIES DATA ENGINEERING TEAM | Jun 2019 – Aug 2019 | Chicago, IL

- ❖ Developed usage tracking architecture. Built “milestone” dashboard to track ETL processes. Gained experience with Kafka, Airflow, InfluxDB, Docker, and more.
- ❖ Delivered a “lunch and learn” talk on Kafka to the department
- ❖ Evaluation/feedback from my manager: “*What makes Roma stand out is her willingness to take on something unknown and her ability to learn it through doing research ... and build that knowledge without hesitation. [This] will make her an exceptional engineer in the future.*”