Roma Bhattacharjee

Chicago, IL • roma.bhattacharjee@princeton.edu • linkedin.com/in/romabhattacharjee • (312) 532-0230

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 (MAT203), Adv. Linear Algebra w/ Applications (MAT204), Algorithms & Data Structures (COS226), Fundamentals of Statistics, Adv. Physics (Mechanics), General Physics II, Introductory Logic, Intro to Macroeconomics, Probability and Stochastic Systems
- TA for MAT203/204 & COS226, Lead SWE for The Daily Princetonian. Member of: Prospect Student Ventures, Princeton Debate Panel, 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); Intro 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, Eunice H. McGuire Excellence in Writing (finalist).
- Exec Board of Student Council (Dir of Technology), Debate Team (Novice), VP 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 teams

MUSIC

- Piano—completed all 12 levels of 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 and Emily Wenger 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 triggers in pre-existing datasets. Co-first author on paper, accepted 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 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."*