Aaryan Sharma

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EDUCATION

University of Illinois Urbana-Champaign(UIUC) **GPA: 3.91/4.0**
Bachelor's of Science Mathematics & CS *Expected: Dec 2025*

EXPERIENCE

UIC College of Engineering, Chicago, IL *June 2023 - May 2024*
Undergraduate Research Assistant

- Evaluated presidential election prediction models using four methods to find the best results.
- Applied the Brier score system to measure forecast accuracy, manipulate conditions, and automate Brier score calculations for diverse scenarios.
- Modified open-source models for mass production of Brier scores, ensuring compatibility with our research parameters and enhancing efficiency.
- Tested four different state combinations in models to spot differences in results.
- Research Proposal - LINK (available on my webpage)

NEC Corporation India, NOIDA, IN *June - Sep 2024*
SWE Intern

- Worked on the Logistics Data Bank(LDB) and Unified Logistics Interface Platform(ULIP).
- Developed a fleet management system using ULIP APIs.
- Coded the system using Python, Java, SQL, HTML/CSS.
- Led a team of interns, conducting reviews, setting targets, and testing code.

PROJECTS

Super Health App *Feb 2024*
Winner - SparkHacks 2024

- Made a Python-based personal health assistant with multiple aggregated features (Doctor's catalog and prescription manager).
- Integrated a search engine based on an inverted matrix approach using maps.
- Utilized Tkinter to create the GUI for the app, which was connected to a database using Sqlite3.

BNF SimpleC Parser *Apr 2024*

- Developed an F# program to parse SimpleC using recursive-descent parsing.
- Checked SimpleC for semantic errors: variable definitions and type correctness.
- Built a symbol table for variable declarations, checked type compatibility, and issued warnings.

Chicago Lobbyist Database *Mar 2024*

- Developed console-based database app in Python using N-tier design, integrating SQLite.
- Focused on Chicago lobbyists, employers, clients, and compensation for data management.
- Implemented functions for data access and object mapping tiers, testing, and handling database interactions.

Assembly Attack Lab *Apr 2024*
Solved All Phases

- Explored five attacks on vulnerable programs, focusing on buffer overflows and stack manipulation.
- Developed and executed exploit strategies, enhancing understanding of program vulnerabilities.
- Achieved successful string argument injection, showcasing an understanding of security weaknesses and exploitation techniques.

EXPERTISE

Languages/Frameworks: Python, C/C++, R, Java, C#, F#, OCaml, Assembly**,** Git, Vim, Valgrind, SQL, Shell
Database: MySQL, SQLite3, MongoDB
Courses: Data Structures, Language and Automata, Machine Organization, Programming Languages & Compilers

ACHIEVEMENTS

- Dean's List - FA 22, SP 23, FA 23, SP 24
- Crowd Favorite @ SparkHacks 2024