

CESAR BATREZ-DELATORRE

West Elsdon, Chicago, IL 60632

(773) 699-6672 || Cesar.btrez.del@gmail.com || github.com/Caesar1222

EDUCATION

Syracuse University

Bachelor of Science in Computer Science — Minor in Mathematics

Expected May 2027

GPA: 3.89/4.0

- **Relevant Coursework:** Data Structures, Discrete Mathematics, Linear Algebra, Probability & Statistics

WORK EXPERIENCE

Syracuse University

AEW Facilitator

August 2025 - Present

Chicago, IL

- Facilitated weekly collaborative learning workshops for CIS 151: Introduction to Computer Science, supporting students in mastering core programming concepts
- Fostered an inclusive, team-oriented learning environment while strengthening communication and leadership skills through facilitating discussions and managing group dynamics

Lavner Education

Technology Instructor

May 2025 - August 2025

Chicago, IL

- Instructing over 10 middle and high school students in beginner to intermediate programming courses across multiple weekly sessions
- Designing over 20 interactive coding exercises using Python and JavaScript to reinforce key programming concepts and promote problem-solving skills

Chicago Architecture Center

Student Fellow

June 2023 - November 2023

Chicago, IL

- Gained proficiency in architectural design software, including Rhino 7, Grasshopper, and AutoCAD, while honing physical skills such as lettering, sketching, and model making
- Collaborated with Just Roots Chicago to conceptualize and design a theoretical community center, integrating innovative ideas to consign community needs

RESEARCH EXPERIENCE

Syracuse University

Undergraduate Student Research

September 2025 - Present

Syracuse, NY

- Conducted research under Professor Venkata Gandikota applying computer science theory and mathematics to develop lattice algorithms for triangular Toeplitz matrices
- Design and analyze algorithms for large matrix structures, leveraging linear algebra, probability, and algorithmic techniques to evaluate efficiency, scalability, and computational complexity

Syracuse University: SOURCE Explore

Undergraduate Researcher

January 2025 - April 2025

Syracuse, NY

- Conducted research on campus transit systems using Graph Theory and Dijkstra's Algorithm to evaluate route efficiency across 15+ shuttle stops and over 40 unique routes; identifying potential time savings of up to 27% through optimal rerouting
- Designed and implemented a graph-based model of Syracuse University's 36-stop shuttle system in Python using NetworkX, and created custom software to calculate shortest paths and optimize routing using Dijkstra's Algorithm
- Presented findings via professional research poster at the SOURCE Explore 2025 Symposium

PROJECTS

Attendance Sign-In Website | *HTML, CSS, JavaScript, Apps script*

- Designed and developed a web-based attendance sign-in system using HTML, CSS, JavaScript, and Google Apps Script for Noble Street's Student Council
- Integrated Google Sheets to automatically record students' names and attendance dates, streamlining the process and enabling more efficient meeting management

Interactive Portfolio Website | *HTML, CSS, JavaScript, Apps script*

- Developed an interactive portfolio website using HTML, CSS, JavaScript, and Google Apps Script to showcase completed projects
- Enhanced user experience by integrating smooth navigation features and interactive elements, ensuring an engaging and intuitive browsing experience

TECHNICAL SKILLS

Languages & Tools: Haskell | HTML/CSS | Java | JavaScript | Python

Libraries & Frameworks: Matplotlib | NetworkX | NumPy | Pandas

Concepts: Data Structures & Algorithms | Graph Theory | Data Visualization

CERTIFICATIONS & HONORS

Renee Crown Honors Program, Syracuse University

May 2025 - Present

Catalyst Scholar, Syracuse University

January 2025 - Present

Global Seal Of Biliteracy (Spanish)

June 2024