Cesar Batrez-Delatorre

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Education

Syracuse University Expected May 2027
Bachelor of Science in Computer Science — Minor in Mathematics *GPA: 3.89/4.0*
• **Relevant Coursework:** Data Structures, Discrete Mathematics, Linear Algebra, Probability & Statistics

Work Experience

Syracuse University August 2025 - Present
AEW Facilitator Syracuse, NY

- 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 May 2025 - August 2025
Technology Instructor 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 June 2023 - November 2023
Student Fellow 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 September 2025 - Present
Undergraduate Student Research 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 January 2025 - April 2025
Undergraduate Researcher 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