Alexander Caceres-Wright

+1 212-518-4269 | acacereswright@gmail.com | LinkedIn | Website | Google Scholar

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EDUCATION

Doctor of Philosophy: Computer Science and Engineering, University at Buffalo (SUNY), Buffalo, New York.
- *Expected Graduation:* December 2028
- **Advisor:** Dr. Kenneth Joseph
- **Dissertation (Tentative):** People Talk Online: What, Why, and How
- **Research Areas:** Computational Social Science; Large Language Models; Natural Language Processing

Master of Science: Computer Science and Engineering, University at Buffalo (SUNY), Buffalo, New York, June 2024

Bachelor of Arts: Cognitive Systems, University of British Columbia, Vancouver, Canada, May 2022
- **Minor:** Psychology

SKILLS & TOOLS

Large Language Models: Llama, BERT
Data Management & Analytics: SQL, R, PostgreSQL, PGAdmin4, Firebase Realtime Database, Pyspark
Programming Languages: Python, Java, C++, C, Haskell, JavaScript
Tools: Git, Jupyter, Visual Studio, LaTeX, JetBrains Suite, JUnit Testing, Flask, Pandas, Matplotlib
Languages: English (Fluent), Spanish (Fluent)

WORK EXPERIENCE

Teaching Assistant, University at Buffalo, Buffalo, NY. August 2025 – Present
- Assisting for CSE 421/521: Operating Systems
- Guiding students through two projects implementing operating system fundamentals
- Holding weekly office hours

Research Assistant, cUBe Lab at the University at Buffalo, Buffalo, NY. June 2023 – Present
- Constructed tools for stance detection using Large Language Models applied to 15 million tweets from the 2020 US Presidential Election. Ran experiments to evaluate LLM prompts and parameters.
- Published peer-reviewed paper: A. Caceres-Wright et al., "Explicit Stance Detection in the Political Domain: A New Concept and Associated Dataset", SBP-BRiMS 2024. **Runner Up: Best Student-Led Paper Award**
- Presented peer-reviewed poster: A. Caceres-Wright, G. Bunn, S. Shuster, and K. Joseph, "Who supports Bernie? Analyzing identity and ideological variation of Bernie supporters on Twitter", IC2S2 2024.
- Investigating how individuals express identity online and how those who share identities speak about shared topics

Data Analyst (Intern), s-cubed: Strategic Sustainability Solutions, New York, NY, September 2024 – June 2025
- Joined the company while it was an early stage startup
- Curated high quality corporate dataset with quality controls
- Ran statistical analysis on financial data, used results to identity key financial metrics for further analysis
- Developed financial models to study corporate resilience to sustainability risk
- Created models to accurately predict missing corporate data when necessary
- Designed a matching algorithm to allow data from different sources to be accurately assigned to the correct entities

Member Service Representative, Lockport Family YMCA, Lockport, NY. September 2023 – May 2024
- Greeted each member upon entry, answer questions and phone calls, and give tours to prospective members
- Ensured information for each member is accurate, engaging with members and other staff when issues arise

Student Assistant, X-Lab at the University at Buffalo, Buffalo, NY. June 2023 – August 2023
- Researched and developed indices of interdisciplinarity using natural language processing
- Completed a literature search aiming to incorporate best previous results into our index

Teaching Assistant, University of British Columbia, Vancouver, BC. January 2020 – December 2020
- Assisted in the delivery of three semesters of CPSC 210: Software Construction
- Duties included running labs, holding office hours, and grading assignments and exams
- Mentored roughly 30 students per semester as they worked on a term-long project. Helped guide design and implementation, and helped debug issues, through weekly 1:1 meetings

PROJECTS

Simulating Trading Models. Python, QuantConnect, Zipline, Pandas, Matplotlib
- Developed simple stock trading models based on various technical indicators such as the Relative Strength Index
- Backtested the models using various frameworks on the stocks of the S&P 500

Museum Interactive Scavenger Hunt. Python, Flask, Firebase Realtime Database, Javascript, CSS
- Implemented a full-stack application for the Niagara Aerospace Museum for visitors to complete a scavenger hunt

- Allows curators to enter or edit clues and exhibits, and visitors to customize the length and difficulty of their hunt

Financial Literacy Application: UB Hacking: Fall 2022 (Hackathon, 1st Place). SQL, JavaFX
- Won first place prize with a prototype JavaFX application aimed at centralizing financial information new immigrants may find useful, such as on banking, Free Application for Federal Student Aid (FAFSA), housing, etc.
- Prompted users with a questionnaire to tailor information they were presented. Stored survey responses in a mySQL database along with a username and password for later retrieval

Research in Cognitive Systems. Python, Git, oTree, R
- Worked as a research assistant in a psychology laboratory programming a variation of the public goods game using the oTree framework
- Utilized this software to collect data and wrote a report of the findings in context of relevant work

Pintos Simple Operating System C
- Developed part of an operating system as part of a course
- Implemented several scheduling algorithms, priority donation, memory management, as well as some user interaction

Text Chat Application C++
- Implemented both server and client side methods such as sending and receiving messages, and blocking other clients
- Created functionality to analyze server side statistics including IP addresses, and ports of logged in clients, and tracking of number of sent and received messages

Modeling Internet Packet Protocols C++
- Implemented several packet transmission protocols such as the selective repeat and Go-Back-N
- Analyzed performance of the protocols via testing and summarized findings in a report

Lossy Image Compression C++
- Compressed images using a space partition tree which minimizes color variability across partitions
- Precomputed color statistics for each region

Book Management System. Java, JavaFX
- Allowed users to enter and edit details such as title, author, subject, and length
- Saved and loaded data for use across sessions
- Implemented both a command line and graphical user interface

ACADEMIC SERVICE
1. **Reviewer**, 2025 International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation (SBP-BRiMS).
2. **Reviewer**, 2025 International Conference on Computational Social Science (IC2S2)
3. **Reviewer**, 2024 International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation (SBP-BRiMS).

PROFESSIONAL MEMBERSHIP
Member, Association for Computing Machinery (ACM). January 2023–Present

AWARDS & INVOLVEMENT
Runner Up: Best Student-Led Paper Award. SBP-BRiMS, September 18–20, 2024
Alumni Mentor. Cognitive System Systems Society, Tri-Mentoring Program. September 2022–May 2024
Summer School on Foundations of Data Science. Bryn Mawr College, June 27–28, 2023
Bloomberg Accelerator Summer School. Virtual, June 2023
First Place Prize, M&T Bank's An Innovative Way to Promote Financial Understanding and Well Being Award. UB Hacking: Fall 2022 (Hackathon). November 5–6, 2022
Outstanding International Student Award. University of British Columbia. Academic Year 2017–2018
Second Degree Black Belt, Kyokushin Karate. Ken Wa Kan Karate, New York City. Achieved March 15, 2015
Assistant Karate Instructor. Ken Wa Kan Karate and Public School 11, New York City. Winter 2010–Summer 2017

RELEVANT COURSEWORK

Graduate Coursework	Undergraduate Coursework
Advanced Topics in Computational Linguistics	Applied Machine Learning
Computational Linguistics	Introduction to Artificial Intelligence
Computational Investment	Basic Algorithms and Data Structures
Data Models and Query Languages	Databases in Data Science
Operating Systems	Functional and Logical Programming
Modern Network Concepts	Software Construction
Computer Security	Pragmatics
Analysis of Algorithms	Understanding and Designing Cognitive Systems

FURTHER LEARNING

Applied Data Science in Python Specialization. University of Michigan via Coursera. *Currently in Progress*
Mathematics for Machine Learning Specialization. Imperial College London via Coursera. *Currently in Progress*
Machine Learning Specialization. Stanford University & Deeplearning.AI via Coursera. Completed September 17, 2024

POSTERS

1. **A. Caceres-Wright**, G. Bunn, S. Shuster, and K. Joseph, "Who supports Bernie? Analyzing identity and ideological variation of Bernie supporters on Twitter", 2024 International Conference on Computational Social Science (IC2S2)

PUBLICATIONS

1. **A. Caceres-Wright**, N. Udhayasankar, G. Bunn, S. Shuster, and K. Joseph, "Explicit Stance Detection in the Political Domain: A New Concept and Associated Dataset", 2024 International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation (SBP-BRiMS)
   - **Runner Up: Best Student-Led Paper Award.**