Alexander Caceres-Wright

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EDUCATION

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

WORK EXPERIENCE

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, N. Udhayasankar, G. Bunn, S. Shuster, and K. Joseph, "Explicit Stance Detection in the Political Domain: A New Concept and Associated Dataset", 2024 Intl. Conf. on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS)
- Published peer-reviewed abstract and presented poster: A. Caceres-Wright, G. Bunn, S. Shuster, and K. Joseph, "Who supports Bernie? Analyzing identity and ideological variation of Bernie supporters on Twitter", 2024 Intl. Conf. on Computational Social Science (IC2S2)
- Building framework to fine-tune LLMs for custom classification tasks using unlabeled data

Student Assistant, X-Lab 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

- 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

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)

RELEVANT COURSEWORK

Applied Machine Learning; Computational Investment; Computational Linguistics; Data Models and Query Languages; Databases in Data Science; Operating Systems; Modern Network Concepts; Computer Security; Introduction to Artificial Intelligence; Software Construction; Basic Algorithms and Data Structures

AWARDS & INVOLVEMENT

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