DAMIÁN BROWNE

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EDUCATION

Loyola Marymount University   **Los Angeles, CA**

Bachelor of Science, Computer Science · Minor: Economics · GPA: 3.69   May 2022

Awards & Honors: Arrupe Merit Scholarship (2018-22) · Dean's List · 2nd Place, LMU ACM Programming Competition (2020)

Selected Coursework

Data Structures	Algorithms
Artificial Intelligence	Compilers
Cognitive Systems Design	Econometrics

Affiliations: LMU Association for Computing Machinery (2019-Present) – Executive Board Member, Events Chair, Mentor for Computer Science Underclassmen; LMU Technical Internship Hunt Club – Co-Founder, Co-President

SELECTED PROJECTS

Causal RL Agent Communication, Transportability Across Heterogenous Environments – Research Project   May – July 2021
- Applied recently published techniques in causal inference AI on agents who communicate across heterogenous environments.
- Modeled the effectiveness of communication policies with respect to the techniques they use to extrapolate/transport useful data and measured results graphically.

Speare – Programming Language and Compiler – Compilers Project   January – May 2021
- Helped create a Shakespearian-English-inspired programming language and spearheaded the project's website.
- Developed a grammar, syntax parser, semantic analyzer, compiler (to JavaScript), and code optimizer.

FASim-NFAConverter – Intro to Theory of Computation Project   December 2020
- Implemented fundamentals of theory of computation to simulate construction and querying of finite automata in Java.
- Methodized conversion of nondeterministic finite automata to deterministic finite automata.

PuckSim – Agent-Based Model of Genetic Evolution – Personal Project   February 2020
- Visually modeled evolution and multi-generational genetic inheritance of fish-resembling agents in Java with the AWT library.
- Agents seek food using two methods, mate to produce offspring with inherited abilities and behaviors (with chance of mutation), and nurse offspring to adulthood.

EXPERIENCE

LMU Summer Undergraduate Research Program   **Remote; Los Angeles, CA**

Researcher   May – July 2021
- Studied recent papers in causal reinforcement learning to derive a research question on multi-agent communication and data transportability using causal adjustment formulae.
- Developed a Python model test hypotheses and run experiments. The repository includes from-scratch frameworks and utilities for causal inference, multi-agent interaction methods, and systems for recording results across simulations.

Praxis Design Build   **Santa Fe, NM**

Construction Laborer   June 2015 – August 2020
- Built and renovated residences in Spanish-speaking environment over five summers for design-build firm in Santa Fe, NM.
- Applied and improved attention to detail, responsibility management, teamwork, and productivity.

SKILLS

Programming Languages: Python, Java, JavaScript, HTML, CSS, C

Software: GitHub, MySQL, Microsoft Office, Adobe Photoshop & Premiere Pro, Google Suite, Windows, Mac OS, Linux

OTHER ACHIEVEMENTS

High School Varsity Basketball (2014-18) – Captain, All-District 1st Team, Desert Academy Male Athlete of the Year, Team Statistician

Danielle Steele Bingham Scholarship (2017) – Desert Academy student embodying highest achievement and passion in mathematics