# Brendan Henrique

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## EDUCATION

University of California, Berkeley

Ph.D. Learning Sciences and Human Development

Loyola Marymount University

Masters of Arts in Urban Education

University of California, Berkeley

Bachelors of Arts in Cognitive Science, Minor in Education, High Honors

Berkeley, CA

August 2021-Present

Los Angeles, CA

June 2019 - May 2021

Berkeley, CA

August 2015 - May 2019

## RESEARCH EXPERIENCE

#### Research Fellow

January 2023 – Present

Transformative Learning Technologies Lab

UC Berkeley and Columbia University

- From Access to Sustainability: Investigating Ways to Foster Sustainable Use of Computational Modeling in K-12 Science Classrooms is an NSF-funded research project that seeks to support and examine the development of computational modeling as a sustained practice in middle school science classrooms.
- Led a team to develop a new biology unit where middle school students are tasked with developing computer code to model photosynthesis.

#### Graduate Student Researcher

August 2021 – Present

Computational Representations in Education Lab

UC Berkeley

- Current project is about the learning experiences of pre-service teachers enrolled in a Critically Conscious Computer Science course.
- Developed and implemented a novel computer science teacher education curriculum. Used qualitative methods to analyze data from the course such as thematic analysis and inductive coding.

## Undergraduate Researcher

Fall 2017 – Spring 2019

Hull Research Group

UC Berkeley

- Studied how middle school students used virtual reality to develop 360-degree stories. Using a human-computer
  interaction framework, I analyzed student videos to find out what challenges arose with emerging technology within
  small groups.
- I developed and implemented a digital literacy curriculum using the social network Space2Cre8. Utilizing qualitative research methods, I analyzed the creative process of middle school students when they interact online through video chats and shared video artifacts.

## Lab Manager

Spring 2018 – Spring 2019

UC Berkeley

Design for Equity Lab

- Directed a team of undergraduate student researchers in the application of statistical tools toward studying the effectiveness of an adaptive equitable pedagogy framework.
- Utilized design based research to perform multivariate regression models on classroom data to inform instructors on how to best support students' learning needs.

## TEACHING EXPERIENCE

#### **Graduate Student Instructor**

Fall 2021- Present

UC Berkeley

Berkeley, CA

- \* CS10: Beauty and Joy of Computing Fall 2018, Spring 2019, Fall 2021
- \* ED140: The Art of Making Meaning Spring 2022, Fall 2022, Summer 2024
- \* ED144: Practicum in Education Fall 2023, Spring 2024, Summer 2024, Fall 2024, Spring 2025
- \* Computer Science Pre-Service Teacher Program Summer 2022, Summer 2023

#### Middle School Science Teacher

June 2019 – June 2021

West Contra Costa Unified School District

Pinole, CA

\* Implemented a NGSS-aligned curriculum for 7th grade science that incorporated the universal design of learning and culturally responsive pedagogy.

\* Drawing on constructivist approaches, I have engaged students' interests to learn concepts through meaningful science projects, active experimentation, videos, and building scientific models.

## **Undergraduate Student Instructor**

Fall 2018- Spring 2019

UC Berkeley

- \* Co-developed and implemented weekly discussion based curriculum for the Beauty and Joy of Computing.
- \* Collaborated with the Head-TA to include equitable pedagogy training for lab assistants.
- \* Received Outstanding Graduate Student Award for my dedication to students in CS10.

#### AWARDS

Computer Science 10

SIGCSE Graduate Student Competition Winner: First place winner of the ACM SIGCSE research competition Pinto-Fialon Fellowship: Awarded to doctoral students who have Portuguese ancestry.

Loyola Marymount Library Graduate Research Award: Awarded for Masters thesis for quality of research and use of library resources.

WCCUSD 100 Teachers Award: Awarded by administrators, families and colleagues to the top 100 educators in the district out of 1700 teachers.

Outstanding Graduate Student Instructor Award: Awarded to the top 10 percent of graduate student instructors.

Top Researcher in Mixed Methods: Awarded to the best researcher in the Design for Equity Lab who specializes in mixed methods.

#### **PUBLICATIONS**

**Henrique, B.** (2025, February). Exploring Critical CS Teacher Education Program Design Through a Science and Technology Studies Approach [Conference Paper]. Special Interest Group in Computer Science Education Symposium, Pittsburgh, PA, United States.

**Henrique, B.** (2024, June). "An act of a revolution": Critical Learning Trajectories in a Pre-service Teacher Computer Science Course [Conference Paper]. International Society of Learning Sciences, Buffalo, NY, United States. https://doi.org/10.22318/icls2024.115107

Henrique, B., Roberto, C., Wilkerson, MH. (2022). Who creates our computational worlds? A review of Critically Conscious Computing: Methods for secondary education. International Journal of Child-Computer Interaction, 35, 100546. https://doi.org/10.1016/j.ijcci.2022.100546

**Henrique, B.**, Altamirano, D., Krikorian, M. (2021). The Effect of Labor Differences in Charter and Traditional Public Schools on Teacher Attitudes and Beliefs. Graduate Library Research Awards. School of Education, Urban Education, Loyola Marymount University. https://digitalcommons.lmu.edu/glra/awards/2021/4

## Conference Presentations

Henrique, B. (2024, April). Understanding How Elementary School PSTs Integrate CS Concepts Into Their Teaching Practice [Roundtable]. American Education Research Association Annual Meeting, Philadelphia, PA, United States.

**Henrique**, **B.** (2024, April). Exploring K-12 Teachers' Trajectories of Engagement with Critically Conscious Computing [Graduate Student Research Competition]. Special Interest Group in Computer Science Education Symposium, Portland, OR, United States. **First Place Winner** 

Fuhrmann, T., **Henrique**, **B.** (2023, October). *MoDa: Exploring Computational Modeling from a Constructionist Perspective* [Conference Workshop]. FabLearn Conference, New York, NY, United States.

**Henrique, B.**, Whittle, R. (2019, March). *Voicing the Local: University-Community Partnerships in the Digital Age* [Conference Session]. UC Links International Conference, Berkeley, CA, United States. https://uclinks.berkeley.edu/uc-links-international-conferences/2019-uc-links-international-conference

Schwartz, S. (2021, November 23). COVID-19 Is a Science Lesson Waiting to Happen. Education Week. Retrieved from https://www.edweek.org/teaching-learning/covid-19-is-a-science-lesson-waiting-to-happen/2021/11

Johnson, S. (2020, December 15). One more challenge for California teachers in distance learning: All new science curriculum. EdSource. Retrieved from

# EDUCATIONAL OUTREACH AND WORK EXPERIENCE

Interim Treasurer Summer 2020-Present

Love. Learn. Success

Berkeley, CA

- \* I serve as a voting board member of an after-school nonprofit that works toward learning experiences for under-served children in the East Bay Area of California.
- \* Advises board president on decisions relating to the long term growth of the organization in terms of employees, students and school sites.
- \* LoveLearnSuccess has now grown to over 9 after school sites across the Bay Area

# Computer Science Education Intern

December 2021- December 2022

SAP

Palo Alto, CA

- \* I conducted analysis of artificial intelligence curricula and converted them to an American school context.
- \* I assisted with the development of new educational materials for use with Snap! (a block-based programming language).
- \* I maintained and moderated an active online computer science learning community for Snap.Berkeley.edu

### **GRE** Content Expert

December 2020- November 2021

Magoosh

Berkeley, CA

- \* I improved student learning outcomes by developing GRE test preparation questions.
- \* I crafted text explanations for questions and filmed video explanations and lessons. Using user-created data, I adapted explanations and videos to meet student's needs.

Lecturer Fall 2015-Spring 2018

Berkeley Splash

Berkeley, CA

- \* Designed engaging and relevant lectures for visiting high schools students from the Bay Area.
- \* Lecture titles included: The Real Mysteries of Time Travel and A Neurological Case Study in Pediatric Epilepsy.

TECHNICAL SKILLS

Programming Languages: Python, Snap!, Stata