

AJ ALVERO

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RESEARCH INTERESTS

Computational Social Science Sociology of Language Sociology of Race & Ethnicity
 Access & Inequality in Education Applied NLP Fairness & Ethics in Computation

EDUCATION

PhD, Education Data Science | Sociology of Education *exp.* 2022

Stanford University

Dissertation: “Language, Stratification, and Systems of Evaluation: Computational Analyses of College Admissions Essays”

Coursework in Race, Inequality, & Language in Education

Graduate Certificate in Computational Social Science 2021

Stanford University Center for Computational Social Science

MS, Statistics 2021

Stanford University

MS, Foreign Language Education (TESOL) 2016

Florida International University

Thesis: “Efficacy and Implementation of Automated Essay Scoring Software in Instruction of Literacies to High Level ELLs”

BA, English Minor in Modern Languages (Spanish & Haitian Creole) 2012

University of Miami

POSITIONS

Stanford University

Graduate Affiliate, Pathways Lab [\[Link\]](#) 09/2019 – Present

Co-founder, Student Narratives Lab [\[Link\]](#) 09/2018 – Present

Graduate Research Assistant 09/2016 – Present

Instructor in Data Science & Education courses 09/2016 – Present

K-12 Education

Miami-Dade County Public Schools

High School Language Arts Teacher 09/2013 – 06/2016

Claes Nobel Educator of Distinction (National Society of High School Scholars)

Rated ‘highly effective’ by the Florida Department of Education

RESEARCH & WRITING

* denotes equal authorship

Peer-Reviewed Publications

4. Tena-Meza, S., Suzara, M., **Alvero, A.** “Coding with Purpose: Learning AI in Rural California.” (*Forthcoming, ACM Transactions on Computing Education*)[\[Preprint\]](#)
3. **Alvero, A.**, Giebel, S., Gebre-Medhin, B., antonio, a., Stevens, M., Domingue, B. (2021) “Essay Content and Style are Strongly Related to Household Income and SAT Scores: Evidence from 60,000 Undergraduate Applications.” (*Science Advances*). [\[Paper\]](#)[\[Code/Data\]](#)
2. Arthurs, N., **Alvero, A.** “Whose Truth is the “Ground Truth”? College Admissions Essays and Bias in Word Vector Evaluation Methods.” *Proceedings of the 13th International Conference on Educational Data Mining* [\[Paper\]](#)
1. **Alvero, A.**, Arthurs, N., antonio, a., Domingue, B., Gebre-Medhin, B., Giebel, S., Stevens, M. (2020) “AI and Holistic Review: Informing Human Reading in College Admissions.” *Proceedings of the AI, Ethics, and Society* [\[Paper\]](#)

Under Review

- 2022 Giebel, S.*, **Alvero, A.***, Pearman, F. “Income & Campus Disparities Among Latinx-Identifying UC Applicants” (*Details of work available upon request*)
- 2022 Gebre-Medhin, B., Giebel S., **Alvero, A.**, antonio, a., Domingue, B., Stevens, M. “Merit for All: Application Essays and the Ritual Production of Merit in US Selective Admissions.” (*Revise and resubmit*) [\[Preprint\]](#)
- 2022 **Alvero, A.** “Critical Perspectives on the Use of Readability Scoring in Education” (*Abstract accepted for book chapter, in preparation*) [\[Link\]](#)
- 2022 Giebel, S., **Alvero, A.**, Gebre-Medhin, B., antonio, a. “Fitting in or Standing out? The Selection of STEM Subfields and the Performance of Gender During the Undergraduate Admissions Process” [\[Link\]](#)
- 2022 **Alvero, A.** “The Strategic Use of Spanish in Evaluative Contexts” (*Details of work available upon request*)

Manuscripts in Preparation

- 2022 **Alvero, A.**, Luqueño, L., antonio, a. “Computational Social Science for Research on Intersectionality: Affordances and Considerations in the Context of College Admissions” [\[Link\]](#)
- 2022 **Alvero, A.** “Ethnic Variation in College Admissions: Latinx Essays and Aspirations” [\[Link\]](#)
- 2022 **Alvero, A.**, Kanopka, K., Sedlacek, Q., “A Call for Critical and Constructive Educational Data Science” [\[Link\]](#)
- 2022 **Alvero, A.**, Moussavian, M., Pal, J. “Linguistic, Cultural, and Narrative Stratification: Computational Analyses of Transfer Admissions Essays” (*Details of work available upon request*)

Opinion

- 2017 **Alvero, A.** “Renaming ‘Confederate Corners’ doesn’t cost a thing.” *The Salinas Californian.* [\[Article\]](#)

TEACHING

Introduction to Statistical Methods

With Dan Schwartz

Stanford University, Graduate School of Education

Fall 2021

Introduction to Data Science

Winter 2019

With Sanne Smith and Dan McFarland

Stanford University, Graduate School of Education & Department of Sociology

Equity and Schooling

Summer 2019

With Jonathan Rosa

Stanford University, Graduate School of Education

The Centrality of Literacies

Summer 2017, 2018

With Antero Garcia

Stanford University, Graduate School of Education

Adolescent Development

Fall 2016, 2017

With Linda Darling-Hammond and Shayna Sullivan

Stanford University, Graduate School of Education

PRESENTATIONS

Invited Presentations & Lectures

- 2022 Stanford Center for China's Economy and Institutions (Freeman Spogli Institute), Stanford EAST House
- 2021 College Board, Research and Psychometrics Team; University of California, Board of Admissions and Relations with Schools (BOARS), Stanford GSE Policy, Organization, and Leadership Studies Seminar, Association of College Counselors in Independent Schools (Data, Analytics, and Trends Committee), Wieman Group
- 2018 Stanford University, Center for Population Health Sciences; Stanford University, Students for Education Reform; Stanford University, Computational Text Analysis in the Social Sciences Group; Stanford University, Higher Education Exchange of Research

Conference Presentations & Activities

- 2022 American Sociological Association
Roundtables: "New and Innovative Methods for Cultural Analysis" and "Gender & Science"
- 2022 Latina/o Studies Association
Session: "Intersecting Computational Data Science and Qualitative Analysis: A Case Study of Latinx Intersectionality"
Presenter/Organizer
- 2022 National Council on Measurement in Education
Session: "Test Optional Policy: The Current Trends and Impact on Applications and Admissions"
Presenter
Session: "Machine Learning Topics"
Discussant
- 2022 American Education Research Association
Session: "Equity Oriented Data Science: Leveraging Computation and Novel Datasets for Higher Education Research and Practice"
Chair and Session Organizer
- 2021 National Association for College Admission Counseling (NACAC) Conference
"Admissions Essays are Strongly Related to Household Income and SAT Scores"

With Sonia Giebel & Francis Pearman

- 2021 American Sociological Association
“Gender and the Pursuit of Academic Inspiration: Lessons from Undergraduate Application Materials.”
With Sonia Giebel
- 2021 American Education Research Association
“Surfacing Gender and Class Patterns in Undergraduate Application Materials: Implications for Academic Pathways.”
With Sonia Giebel
- 2021 ACM Conference on Fairness, Accountability, and Transparency (FAccT)
Doctoral Colloquium
- 2020 Mechanism Design for Social Good (MD4SG)
“From Pipeline to Pipelines: How Multiple Definitions of CS Education Distort Enrollment Data”
With Stephanie Tena-Meza & Miroslav Suzara
- 2020 Association for the Study of Higher Education
“In Between the Lines: Discovering the Nuances with Latinx Transfer Essays”
With Rosalia Zárate & Melissa Mesinas
- 2020 Society for Social Studies of Science Conference (*declined*)
“Beyond Learners: A Conceptual Framework for AI in Education Research at Meso- and Macro-Levels”
With Mitchell Stevens
- 2020 American Sociological Association
“Applications Essays and the Performance of Merit in US Selective Admissions.”
With Ben Gebre-Medhin, Sonia Giebel, anthony antonio, Ben Domingue, & Mitchell Stevens
- 2020 American Educational Research Association Satellite Conference on Data Science
“A Call for Critical and Constructive Data Science in Teacher Education.”
With Klint Kanopka & Quentin Sedlacek
- 2020 Comparative & International Education Society
“Beyond grades and test scores: Understanding school effects on college access through semantic analysis of application essays of Latinx students.”
With anthony antonio
- 2020 26th Annual Conference on Language, Interaction, and Culture at UCLA (*cancelled*)
“Embedded Ideologies: Challenging the Broad Use of Readability Scoring.”
- 2020 Sociology of Education Association
“The Co-Creation of Narratives of Academic Worth in Undergraduate Admissions: Evidence from a Corpus of 826,624 College Essays.”
With Ben Gebre-Medhin, Sonia Giebel, anthony antonio, Ben Domingue, & Mitchell Stevens
- 2019 TextXD Symposium
“Searching for (Dis)Continuities in Ed Tech’s Discourse of Invention: A Semantic Network of Ed Tech Patents (1968 - 2016).”
With Sebastian Munoz-Najar Galvez & Klint Kanopka
- 2018 TextXD Symposium

“Sociocultural Factors of the College Admissions Essay.”

- 2016 Caribbean Studies Association
“Kreyòl praxis and pedagogy in the diasporic classroom.”

Posters

- 2021 Computational Social Science Society of the Americas Conference 2021
“Computational Social Science for Research on Intersectionality: Affordances and Considerations in the Context of College Admissions”
- 2021 West Coast NLP (WeCNLP) Conference 2021
“Whose Truth is the “Ground Truth”? College Admissions Essays and Bias in Word Vector Evaluation Methods”
- 2021 Transforming Institutions Conference
“Topic Distributions in Latinx College Admissions Essays by Geography, Language, and Parental Education”
With Leslie Luqueño & anthony antonio
- 2020 Mechanism Design for Social Good (MD4SG)
“Designing for Fairness in a Post-SAT College Admissions Universe” With Sonia Giebel
- 2019 International Conference on Machine Learning (Latinx in AI Workshop)
“Unsupervised Text Analysis in Applied Settings: A Case Study in Selective College Admissions.”
- 2017 Race, Inequality, and Language in Education (RILE)
“Machine Learning Gets a Tutor: Literacy, Language, and Computational Methods.”

PROJECTS & GRANTS

Student Narratives Lab

Initiated data share with University of California Office of the President
PIs: Mitchell Stevens, anthony antonio, Ben Domingue

Building an Anti-Racist GSE

Syllabus consultant, Education Data Science courses

Computational Text Analysis in the Social Sciences

“Student Projects for Intellectual Community Enhancement” Grant (\$5,000)

SELECT MEDIA MENTIONS & APPEARANCES

The Atlantic [1], Los Angeles Times [1], New York Times [1, 2], Harper’s Magazine [1], The Economist [1], Newsweek [1], The Chronicle of Higher Education [1], MIT Admissions [1], Inside Higher Ed [1, 2], Higher Ed Dive [1], Forbes Magazine [1], Pod Save the People [1], ABC7 News Bay Area (KGO-TV) [1], Mustang News (Cal Poly) [1], Wall Street Journal [1, 2], School’s In (Podcast with Stanford GSE Dean Dan Schwartz and Denise Pope) [1], The Philadelphia Inquirer [1], The Journal Editorial Report [1], Monterey County Weekly [1], The Smithsonian Magazine [1], Diverse Issues in Higher Education [1], The Salinas Californian [1], Reason.com [1]

HONORS & AWARDS

Stanford University

Human-Centered Artificial Intelligence (HAI) Graduate Fellow	\$2,000	09/2021 – 06/2022
McCoy Family Center for Ethics in Society Fellow	\$3,000	09/2020 – 06/2021

Diversifying Academia, Recruiting Excellence Fellowship Interdisciplinary Graduate Fellowship <i>Naidu Family Interdisciplinary Graduate Fellowship</i>	\$96,200/2 years	09/2019 – 06/2021
Enhancing Diversity in Graduate Education Fellowship	\$12,800/4 years	09/2018 – 06/2020
The Dean's Fellowship	\$30,000	09/2016 – 06/2020

Florida International University

FLAS Summer Fellowship at the Haitian Summer Institute	\$6,680	05/2015
Madeline Kitts Scholarship	\$5,000	05/2015
FIU Graduate Grant	\$5,000	05/2015
Bellsouth Education Scholarship	\$3,000	08/2015
FIU Latin American and Caribbean Center Scholarship	\$500	05/2015

Other

ICQCM Spencer Scholar		06/2021
International Conference on Machine Learning Travel Grant	\$1,500	06/2019
El Centro Chicano y Latino Charlene J. Porrás Award	\$1,000	06/2019
El Centro Chicano y Latino Outstanding Graduate Mentor		09/2018 – 06/2019
Hispanic Scholarship Fund (2016 and 2017)	\$6,500	
Eugene V. Cota-Robles Fellowship (<i>declined</i>)		

PROFESSIONAL ACTIVITIES

Member

American Sociological Association
 American Educational Research Association
 Computational Social Science Society of the Americas

Reviewer

Journal: AERA Open, Proceedings of ACM Fairness, Accountability, and Transparency (FAccT), Educational Researcher

Conference: American Educational Research Association, Literacy Research Association, South Florida Education Research Conference, TESOL International

SERVICE & ENGAGEMENT

Stanford University

Co-President, Sociology and Education Network	09/2020 – 06/2021
El Centro Chicano y Latino Graduate Scholar in Residence	09-2018 – 09/2020
EDGE Mentor	09/2018 – 06/2019
Mentor and Program Organizer, Stanford GSE Mentorship Program	09/2017 – 06/2018
Financial Officer, Computational Text Analysis in the Social Sciences	09/2017 – 06/2020

Advising

Graduate Student Advisor:	
Thea Rossman, Capstone Project in Critical Studies in Race and Ethnicity	2020
Noah Arthurs, Undergraduate Thesis in Computer Science	2017

Research supervisor, Stanford Institute for Research in the Social Sciences
 Research Assistant Internship Program [\[Link\]](#) 06/2020 – 06/2022
 Interns: Alicia Hoffmann, Misha Moussavian, Jasmine Pal

TRAINING, WORKSHOPS, & OTHER EXPERIENCES

Institute in Critical Quantitative, Computational, and Mixed Methodologies (ICQCM) Summer Training and Summit Trainee and participant Virtual and Baltimore, MD	06/2021 – 03/2022
The Summer Institutes in Computational Social Science Instructor, San Francisco Bay Area site (BAY-SICSS) Virtual	06/2020 – 07/2021
Stanford Graduate Summer Institute Student, <i>Ethics and the Academy</i> Virtual	08/2020
Stanford Libraries Presenter, <i>Gear Up for Social Science Data</i> Palo Alto, CA	10/2018
Stanford Center for Spatial and Textual Analysis Visiting Scholar Palo Alto, CA	07/2017 – 09/2017
ICPSR Summer Program in Quantitative Methods of Social Research Student, <i>Machine Learning for the Analysis of Text as Data</i> Chapel Hill, NC	06/2017
Haitian Summer Institute at Florida International University Student and FLAS Fellow, Kimberly Green Latin American and Caribbean Center Miami, FL & Southern Haiti	06/2015 – 08/2015
Cuban Heritage Collection at the University of Miami Student archivist Coral Gables, FL	08/2011 – 02/2012

LANGUAGES & SKILLS

Human Languages

Fluent Spanish; Proficient Haitian Creole; Basic Japanese (written and spoken)

Computer Languages & Software *Frequent:* R, Python, LaTeX, Unix, SLURM, Microsoft Office, Google Drive; *Not as frequent:* Javascript, Stata, Tableau, C++