

## Employment

2020– Postdoctoral Scholar, DataLab, University of California, Davis

## Education

2020 Ph.D. English Literature, University of California, Santa Barbara

Dissertation: “Literalism: Reading Machines Reading”

Committee: Alan Liu (co-chair), Rita Raley (co-chair), Jeremy Douglass, Wolf Kittler

2016 M.A. English Literature, University of California, Santa Barbara

2013 B.A. English Literature, University of Iowa

## Publications

### Journal Articles

“-graphic Encoding,” invited for submission to *Amodern* 12: “Alternative Print Technologies and Revolution,” eds. Andrew Amstutz and Thomas S. Mullaney (under review)

“Error Aligned,” *Textual Cultures: Texts, Contexts, Interpretations* 12.1 (Spring 2019): 155–182. doi.org/10.14434/textual.v12i1.27153

“Fugue States,” *Journal of Sonic Studies* 16: “Materials of Sound,” ed. Caleb Kelly (May 2018). researchcatalogue.net/view/380109/380110

### Book Chapters and Conference Proceedings

“Concatenative Textuality,” *Proceedings of the Source Code Criticism Seminar, March 25–26, 2022*, Basel: Universität Basel (forthcoming)

“Sonic Materialism and/as Method,” *The Bloomsbury Handbook of Sonic Methodologies*, eds. Michael Bull and Marcel Cobussen, London: Bloomsbury (December 2020)

### Essays and Reviews

Review essay, “Cultural Gradients and the Sociotechnics of Data,” *American Literature* 95.2: “Critical AI: A Field in Formation,” eds. Rita Raley and Jennifer Rhee (forthcoming)

Review, *Eavesdropping: A Reader*, eds. James Parker and Joel Stern, Melbourne: City Gallery Wellington, Liquid Architecture, and Melbourne Law School (2019). *Journal of Sonic Studies* (January 2021). researchcatalogue.net/view/558982/1115318

“A Font of Fonts,” with Fred Benenson, *The Future of Text: A 2020 Vision*, ed. Frode Hegland (November 2020). doi.org/10.48197/fot2020a

Review essay, “The Unfamiliar,” with Jeremy Douglass, Caterina Lazzara, and Rita Raley, *Los Angeles Review of Books* (June 2015). lareviewofbooks.org/article/the-unfamiliar

### Digital Projects

An extensive portfolio of these projects is available at [tylershoemaker.info/research](http://tylershoemaker.info/research).

2015– English Broadside Ballad Archive, Digital Humanities, Media, and Programming Specialist

The English Broadside Ballad Archive digitizes, transcribes, and creates analytical tools for over 9,000 seventeenth-century ballads. My responsibilities to the project have included extensive web development work, data-driven text analysis, project management, grant writing, ballad transcription, cataloguing, and training and supervising research assistants.

Website: [ebba.english.ucsb.edu](http://ebba.english.ucsb.edu)

2022– Shared Cataloging of Early Printed Images, Project Manager and Natural Language Processing Lead

The Shared Cataloging of Early Printed Images project links together collections of early modern prints (woodcuts, line drawings, etc.) using a suite of image recognition technologies. In addition to general project management, my contributions involve supplementing our computer vision models with linguistic data to improve the project's search capabilities.

Website (project announcement): [datalab.ucdavis.edu/collaborations](http://datalab.ucdavis.edu/collaborations)

2020–2023 BioPortal, Technical Lead

BioPortal tracks disease outbreaks in livestock, providing epidemiological data to academic researchers, veterinarians, and farmers. With BioPortal, I am investigating whether language modeling might be leveraged to find indications of past, ongoing, or future outbreaks in both social media data and histopathology reports.

Website: [bioportal.ucdavis.edu](http://bioportal.ucdavis.edu)

2020–2021 wateReview, Technical Lead

wateReview is a corpus exploration platform for a data-driven literature review about water management in Latin America. I designed and built the platform, along with its many interactive visualizations (a multi-faceted topic model viewer, network graphs, chord diagrams, and more).

Website: [watereview.ucdavis.edu](http://watereview.ucdavis.edu)

2017–2020 The Maker Lab, Research Assistant

The Maker Lab integrates centuries of text technologies—from recreations of early modern inking balls to 3D-printed ‘woodcuts’—to investigate the history and making of print. I assisted in the installation of a replica nineteenth-century printing press, fabricated type for workshops, replicated printing tools, and trained faculty and graduate students to use the Lab's facilities.

Website: [emc.english.ucsb.edu/maker-lab](http://emc.english.ucsb.edu/maker-lab)

2017–2020 WhatEvery1Says, Research Assistant

WhatEvery1Says studies public discourse about the humanities, using topic modeling to analyze a corpus comprised of several hundred thousand news articles. My contributions to the project included corpus design, data preparation experiments, optimizing topic models for human readability, and developing outlets for research dissemination.

Website: [we1s.ucsb.edu](http://we1s.ucsb.edu)

## Awards, Grants, and Honors

2023 Norberg remote use grant for “Indexing Semantic Association,” Charles Babbage Institute, University of Minnesota

2018 Multicampus Graduate Working Group Grant for “Cal DH,” University of California Humanities Research Institute

2017 Regents Fellowship, University of California, Santa Barbara

The William and Marjorie Frost Award for Scholarly Writing for “Fugue States,”  
Department of English, University of California, Santa Barbara

2014 Regents Fellowship, University of California, Santa Barbara

### **Presentations and Conferences**

- 2023 “Indexing Semantic Association,” Technolinguistics in Practice: Socially Situating Language in AI Systems, University of Siegen, May 24–27
- 2022 Participant, Model Realities seminar, German Studies Association, Houston, September 15–18  
“Preprocessing the Word,” Source Code Criticism: Hermeneutics, Philology, and the Didactics of Algorithms, University of Basel, March 25–26
- 2020 “Type After the Code Point,” Before and Beyond Typography, Stanford University, June (rescheduled due to COVID-19)  
“Plaintext Scrim,” Annual conference, Modern Language Association, Seattle, January 9
- 2019 “Script Hacks and Visual Spoofs,” Creative Multilingualism: Scriptworlds, University of California, Santa Barbara, May 3  
“The Edge of Sense,” Annual conference, Society for Textual Scholarship, The New School, New York City, March 21  
“The Error that Catches the Eye,” Annual conference, Modern Language Association, Chicago, January 5
- 2018 “Scanbed Poetics,” Annual conference, Electronic Literature Organization, University of Montreal, August 14  
“Font Futures,” Wireframe Studio symposium: “Future Tripping,” University of California, Santa Barbara, April 24  
“Wordless Labor,” Annual conference, Modern Language Association, New York City, January 6
- 2017 “Linotypes and Linotext Minima,” Cal DH work session, University of California, Los Angeles, November 2  
“Fugue States,” Annual conference, American Comparative Literature Association, University of Utrecht, July 6–9

### **Software and Digital Arts Practice**

- 2022 hOCRpy  
A Python package for parsing and analyzing the results of optical character recognition (OCR) software like Tesseract. In addition to making OCR output data easier to work with, hOCRpy provides functionality to predict the page format of unseen pages (i.e. when no page image is available) and re-align those pages’ contents.  
Available at [github.com/t-shoemaker/hOCRpy](https://github.com/t-shoemaker/hOCRpy)
- 2019 “.notyetdef,” with Fred Benenson  
This project trains a generative adversarial network on Unicode-enabled font files to create hybrid glyphs from extant script systems. These new glyphs serve as a vantage from which we are able to survey font internationalization and global script representation in computing.  
Sample: [tylershoemaker.info/research/notyetdef](https://tylershoemaker.info/research/notyetdef)

## Teaching

### University of California, Davis

#### *Instructor*

- 2022 Adventures in Data Science (with Carl Stahmer and Pamela Reynolds), Winter
- 2021 Adventures in Data Science (with Carl Stahmer and Pamela Reynolds), Winter

#### *Workshops and Instructional Support*

- 2023 Principles of Data Visualization, April
- 2022 Python Basics (series), October–November
  - Introduction to Collaborative and Reproducible Research Practices with R (series), September
  - Natural Language Processing with Python (series), May
  - Getting Started with Textual Data (series), February
  - Introduction to Version Control with Git, February
- 2021 Introduction to the Unix Command Line, November
  - Reproducible Research for Teams with GitHub, May
  - Introduction to the Unix Command Line, February
  - Introduction to Version Control with Git, February
- 2020 Introduction to Version Control with Git, December
  - Course Liaison, Topics in Applied Data Science (with Vladimir Filkov), Fall

### University of California, Santa Barbara

#### *Teaching Associate (Instructor of Record)*

- 2019 American Literature from 1900 to Present: Disjunction and Collage, Summer
- 2017 Introduction to Literary Study, Summer
  - Media and Information Culture: Mediating Text (with Jeremy Douglass), Spring
- 2016 Introduction to Literary Study, Summer

#### *Teaching Assistant*

- 2020 Dystopian Fiction, Spring
  - Public Speaking, Winter
- 2019 Proseminar: Scholarships, Fellowships, and Grants Applications Workshop, Fall
  - Introduction to Literature and the Culture of Information, Spring
  - Introduction to Literary Study, Winter
- 2018 Detective Fiction, Fall
- 2016 Introduction to Literature and the Culture of Information, Spring
  - Detective Fiction, Winter
- 2015 Introduction to Literary Study, Fall

#### *Workshops*

- 2017 3D Printing and/as Type Design, November

## Research Assistantships

- 2018–2019 Multi-Scriptworlds and the Visual Imagination, supervised by Sowon S. Park  
Coordinated a trip to the Getty Research Institute, where undergraduate students examined materials from the Institute’s concrete poetry collection. Taught seminars preparing students for the trip and organized an exhibition of students’ creative responses to their visit. These responses were displayed during the Scriptworlds conference (held at the University of California, Santa Barbara in May 2019).
- 2018–2019 *The Catalyst*, supervised by Brian Donnelly  
Supervised the creation of three issues of an undergraduate literary arts magazine and taught the magazine’s associated Interdisciplinary Writing course.
- 2016–2017 Transcriptions Center, supervised by Jeremy Douglass  
Organized visits by speakers and cross-campus reading groups, gave workshops on 3D printing, co-taught an upper division undergraduate seminar (“Mediating Text”), and provided instructional support for English courses.
- 2016–2017 Machine Reading and Writing, supervised by Rita Raley  
Produced an annotated bibliography summarizing critical discourses about chatbots for a course on “Machine Reading and Writing”; further work included reviews of experimental literature and background research on Russian Futurism and Dada.

## Professional Service

### *Reviews*

- 2021– *Digital Humanities Quarterly*  
2021– Association for Computers and the Humanities, annual conference

### *Program Committees*

- 2021– Natural Language Processing for Digital Humanities Workshop, The International Conference on Natural Language Processing

## References

- Alan Liu, Distinguished Professor, Department of English, University of California, Santa Barbara, ayliu@ucsb.edu
- Rita Raley, Associate Professor, Department of English, University of California, Santa Barbara, ritaraley@protonmail.com
- Carl Stahmer, Executive Director, DataLab, University of California, Davis, cstahmer@ucdavis.edu
- Wolf Kittler, Professor, Department of Germanic and Slavic Studies, University of California, Santa Barbara, kittler@gss.ucsb.edu
- Garrett Stewart, James O. Freedman Professor of Letters, Department of English, University of Iowa, garrett-stewart@uiowa.edu