

Craig Messner, PhD

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CURRENT AFFILIATIONS

Lecturer

2023 – Present

JOHNS HOPKINS UNIVERSITY CENTER FOR DIGITAL HUMANITIES

I am a member of the Johns Hopkins Data Science and AI Institute and an affiliate of the Johns Hopkins Center for Language and Speech Processing.

Assistant Research Scientist

2024 – Present

JOHNS HOPKINS UNIVERSITY DEPARTMENT OF COMPUTER SCIENCE

Secondary appointment.

EDUCATION

Ph.D. in English Literature

2012 – 2021

UNIVERSITY OF CALIFORNIA-LOS ANGELES

Dissertation: *Speech as Writing: Literary Dialect Orthography in the United States 1790- 1930.*

Employed language modeling to examine literary uses of nonstandard English.

B.A. in English

2008 – 2012

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

Highest Honors

PEER-REVIEWED PUBLICATIONS

1. Elisabeth Fittschen, Sabrina Xin Li, Tom Lippincott, Leshem Chosem and **Craig Messner** "Pretraining Language Models for Diachronic Linguistic Change Discovery" *Findings of the EACL* doi:10.18653/v1/2026.findings-eacl.241
2. **Craig Messner**, Tom Lippincott "Transferring Extreme Subword Style Using Ngram Model-Based Logit Scaling" *NLP4DH 2025 @ NAACL* doi:10.18653/v1/2025.nlp4dh-1.24
3. **Craig Messner**, Tom Lippincott "Examining Language Modeling Assumptions Using an Annotated Literary Dialect Corpus" *NLP4DH 2024 @ EMNLP* doi:10.18653/v1/2024.nlp4dh-1.32
4. **Craig Messner**, Tom Lippincott "Pairing Orthographically Variant Literary Words to Standard Equivalents Using Neural Edit Distance Models" *LaTeCH-CLfl 2024 @ EACL* doi:10.18653/v1/2024.latechclfl-1.26
5. **Craig Messner** "Pym's Games" in *Poe Studies: History, Theory, Interpretation* (Volume 47)

RECENT PRESENTATIONS

1. "Evaluating the Use of Synthetic Data in Humanities Pretraining" *New Directions in Text as Data (TADA) 2026*
2. "LLMs and Nonstandard Orthography" *Society for the History of the English Language (SHEL)-13 2024*
3. "Towards Automatic Alignment of Literary Orthographic Variants" *Alliance of Digital Humanities Organizations DH Conference 2024*
4. "How well do Pretrained LLMs handle variant literary orthography?" *New Directions in Text as Data (TADA) 2023*
5. "Towards a History of Variant Literary Orthography: BERT-based Normalization of 19th Century Spelling" *Association for Computers and the Humanities (ACH) 2023*
6. "Pretrained Transformer Models for the Alignment of Orthographic Variants" *MASC-SLL 2022*

COURSES TAUGHT AND DEVELOPED

AS.360.306/606: Computational Intelligence for the Humanities

- Developed and taught for 3 semesters: S/S 2024, 2025, 2026. Aimed at both undergraduate and graduate learners.
- Focuses instruction around a capstone project that combines literary or historical research with empirical analysis using AI/ML methods
- Builds skills in interpreting both traditional literary/historical forms and models as interpretable artifacts by combining research with written analysis
- Has led to multiple further research collaborations with participants

AS.360.305/605: Introduction to Computational Methods for the Humanities

- Contributed development effort during 2024. Aimed at early undergraduate learners.
- Teaches computation (Python programming language) in a humanistic frame by focusing on both text and programs as interpretable artifacts

English 4W: Critical Reading and Writing – What Was Writing?

- Developed and taught for a total of 7 quarters, 2016-2017 and 2021. Aimed at early undergraduate learners.
- Designed around a mix of rapid, rubric-guided academic writing and computational research exercises
- Builds critical writing competency across form (prose, poetry) and medium (text, video, interactive)

COURSES TAUGHT

- Major American Authors
- Literature in English 1850-Now
- Literature in English to 1700
- Shakespeare's Later Plays
- Science Fiction
- Contemporary American Fiction
- Introduction to Digital Humanities

LEADERSHIP AND AFFILIATIONS

Member: Johns Hopkins University Data Science and AI Institute (DSAI)	2024-
Affiliate: Johns Hopkins University Center for Language and Speech Processing	2024-
Liaison Representative: Association for Computational Linguistics (ACL) Special Interest Group on Language Sciences for the Socio-Economic Sciences and the Humanities (SIGHUM)	2024-2026
Co-facilitator: Johns Hopkins University Digital Humanities Workshop	2024-2025

SERVICE

Member: JHU Krieger School of Arts and Sciences AI Workshop Program Committee	2026-
Reviewer: Conference on Language Modeling (COLM)	2026-
Program Committee member: NLP4DH Conference	2024-
Program Committee member: SIGHUM LaTeCH-CLfI Workshop	2024-
Reviewer: ACL Rolling Review	2024-

Reviewer: LaTeCH-CLfL-2024	2024
Reviewer: 8th Workshop on Representation Learning for NLP	2023
Panel moderator: UCLA EPIC Humanities Now: Transformative Teaching conference, Innovative Teaching with Technology Panel	2019
Graduate student member: UCLA faculty search committee (New Methods in Literary Criticism)	2018
Participant: UCLA Mellon Seminar – “Digital Gateway.”	2015
Instructional Assistant: Beyond the Digitized Slide Library: Summer Institute on Digital Humanities and Art History 2014 + 2015	

RECENT INVITED TUTORIALS, TALKS AND WORKSHOPS

1. "Deep Humanities LLM Research: Getting in to Interpretability" – Presented at *Intelligence and and imitation: Mind, Mechanism, Mimesis* Workshop 4/26
2. "How can I use an LLM in my Research?" – Presented at Penn Libraries 4/26
3. "Finetuning in Humanities AI/ML" – Presented to the Experimental Language Modeling (ELM) lab at Morgan State University 2/26
4. "What Does DH Mean to You?" – JHU DH Workshop 9/24

HONORS AND AWARDS

Alexander Grass Humanities Institute Faculty Fellow	2024-2025
UCLA Department of English Dissertation Fellowship	2019-2022

PRIOR EXPERIENCE

Postdoctoral Researcher

Supervisor: Professor Tom Lippincott
Sept. 2021 – July 2023

JOHNS HOPKINS CENTER FOR DIGITAL HUMANITIES

- Developed a novel annotated dataset of non-standard English language literary works
- Executed a research program that probed large language model knowledge of English dialects
- Designed and implemented a computational humanities curriculum

Teaching Assistant

2015 – 2021, 2013 – 2014

UCLA DEPARTMENT OF ENGLISH

- Courses taught include early United States literature, science fiction, survey courses covering 19th and 20th century anglophone literature and writing composition
- Designed and solo taught a DH-centric critical reading and writing course

Teaching Assistant

Sept. 2018 – Dec. 2018

UCLA DIGITAL HUMANITIES PROGRAM

- Facilitated technical lab sessions for an introduction to digital humanities class. Designed technical and theoretical instructional materials

Research and Instructional Technology Consultant

2014 – 2015

UCLA HUMANITIES TECHNOLOGY

- Supported a Moodle-based educational content management system
- Trained faculty in the use of software tools for use in both pedagogy and research
- Provided programming and data support for faculty research projects,