Annie K. Lamar

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Work

Assistant Professor of Computational Classics Director, Low-Resource Language (LOREL) Lab

2024

University of California, Santa Barbara

Education

Stanford University, Stanford, CA

2024

PhD, Department of Classics

Dissertation: "Formulaic Mechanics: A Computational Model of the Homeric Formula"

Stanford Research Computing Fellow '23

Data Science Scholar, Stanford Data Science '21-23

Digital Humanities Graduate Fellow, Center for Spatial and Textual Analysis '21

Stanford Graduate School of Education, Stanford University, Stanford, CA

2023

MA, Education, emphasis Education Data Science

University of Puget Sound, Tacoma, WA

2019

B.A. Classical Languages, summa cum laude

B.S. Computer Science, minor Mathematics, summa cum laude

University Honors Program

Peer-Reviewed Publications

Lamar, Annie K, Kaya, Zeyneb. 2023. Measuring the Impact of Data Augmentation Algorithms for Extremely Low-Resource NMT. In *Proceedings of the Sixth Workshop on Technologies for Machine Translation of Low-Resource Languages (LoResMT23)*, pp. 101-109. Association for Computational Linguistics. <u>Available here</u>.

Lamar, Annie K. 2021. "Review: A Conversation with the Creators of Alpheios Reading Tools." *Society for Classical Studies Digital Review Series*. Edited by T.H.M. Gellar-Goad. <u>Available here</u>.

Lang, A., Dombrowski, Q., & Lamar, A.K. (2021). The Ghost in Anouk's Laptop. The Data-Sitters Club, 9. https://datasittersclub.github.io/site/dsc9.html.

Lamar, Annie K., Chambers, America. 2020. "Generating Metrically Accurate Homeric Poetry with Recurrent Neural Networks." *International Journal of Transdisciplinary Artificial Intelligence* Vol. 2, No. 1: pp 1-25. DOI: 10.35708/TAI1869-126247.

Lamar, Annie K., Chambers, America. 2019. "Generating Homeric Poetry with Deep Neural Nets." 2019 International Transdisciplinary AI Conference. DOI: <u>10.1109/TransAI46475.2019.00020</u>.

Lamar, Annie K., Chambers, America. 2018. "Preserving Persona through a Pivot Language: Low-Resource NMT of Ancient Languages." 2018 IEEE MIT Undergraduate Research Technology Conference. *IEEE Xplore Digital Library*. DOI: 10.1109/URTC45901.2018.9244794.

Other Work Experience

Adjunct Faculty Summer 2024

University of Puget Sound, Tacoma, WA

- Design and run an original interdisciplinary course on *Literary Text-Mining*
- Compose and give lectures on a variety of text-mining methods
- Lead students in literary and philological discussions about equity, representation, and ethics
- Guide students to integrate learned computational approaches to literary analysis with a final project

High-Performance Research Computing Consultant

2023 – present

Stanford Research Computing Center (SRCC), Stanford University

- Create, improve, and test scripts in Python and R for a variety of NLP tasks (example with LLMs)
- Design and run workshops on research computing in Python and R
- Aid SRC team in acquiring funding resources and writing grants
- Collaborate on a book project, titled Research Computing for Humanists

Technical Data Science Mentor

2023 - 2023

Data Science for Social Good, Stanford University

Project: Food Bank Data Optimization Project

- Aid faculty in designing and scoping a data-driven project for social impact.
- Design learning activities and prepare technical infrastructure for summer internship program.
- Run daily lab meetings and aid students in learning project management.
- Teach technical data science skills to students in one-on-one and group settings.

Lead Graduate Mentor 2019 – 2024

Stanford Center for Spatial and Textual Analysis (CESTA)

- Design internship curriculum and coordinate program events for 30 undergraduate interns per quarter.
- Create and lead bi-weekly workshops on academic and professional skills.
- Consult with students and faculty on technical and computational challenges.
- Develop and recommend learning pathways for student skill development.
- Evaluate up to 150 annual student internship applications and help organize the admission process.
- Collaborate with CESTA staff members to integrate internship program into broader CESTA mission.

Technical Graduate Research Assistant

2019 – present

Professor Susan Stephens Director of Graduate Studies, Department of Classics

Publication: Ancient Greek Athletics: Primary Sources in Translation (Stocking & Stephens, 2021)

Publication: Callimachus' Epigrams (Stephens, 2023, in press)

- Created maps and tables using ArcGIS Pro and Adobe Illustrator.
- Developed indices for names and vocabulary throughout text.
- Wrote and edited glossaries for Greek terms throughout texts.
- Help manage the acquisition of images and copyright permissions.
- Communicate with Oxford University Press about project progress and needs.

Primary Instructor: "Writing Between Disciplines"

2020 - 2021

Stanford Pre-Collegiate Studies, Stanford, CA

- Designed original curriculum to teach interdisciplinary writing to a class of 20 high-school students.
- Taught daily 3-hour seminars for 2 weeks each year.
- Mentor students 1:1 on their writing skills and future academic plans.
- Curated an inclusive classroom environment by inviting in guest speakers from underrepresented backgrounds in academic, cultivating an environment of respect, and being transparent about my own academic and socio-economic background.

Teaching Experience

Summer 2024	Literary Text-Mining (adjunct faculty & course designer) University of Puget Sound
Summer 2024	Study Abroad: Greece (co-instructor) University of Puget Sound, Faculty lead: Prof. Brett Rogers
Summer 2023	Study Abroad: Greece (co-instructor) University of Puget Sound, Faculty lead: Prof. Brett Rogers
Fall 2021	Virtual Italy: Methods for Historical Data Science (co-instructor) Faculty lead: Prof. Giovanna Ceserani
Summer 2021	Writing Between Disciplines (primary instructor & course designer) Stanford Pre-Collegiate Studies Summer Program
Summer 2021	Virtual Italy: Methods for Historical Data Science (co-instructor) Faculty lead: Prof. Giovanna Ceserani
Spring 2021	Intermediate Greek: Homer's Odyssey (primary instructor)
Winter 2021	Ten Things: The Archaeology of Design (TA) Faculty lead: Prof. Michael Shanks
Summer 2020	Writing Between Disciplines (primary instructor)

Conference Papers & Presentations

[Paper] Sherman, Alexander; Guhr, Svenja; Monaco, Jessica; Warner, Matt; Lamar, Annie K.; Algee-Hewitt, Mark. (August 2024) "A Home without a 'House': Modelling Domestic Space in Nineteenth-Century British Fiction." *DH2024*. Washington DC.

[Panelist] Lamar, Annie K. (2024, January) "Future Most Vivid: Creating the Conditions for Human-AI Collaboration in Classical Studies." *Society for Classical Studies Annual Meeting*. Chicago, Illinois.

[Paper] Lamar, Annie K., Dubit, Rachel E. (2023, December) "in ϝοἴνῷ veritas: A Semantic Analysis of Wine in Ancient Greek Literature." Wine & Institutions in the Ancient World: International Conference & Book Project by Dimitri Van Limbergen. Ghent, Belgium.

[Panelist] Lamar, Annie K. (2023, May) "Increasing the Usability of Open-Access Data: The Challenges of Linked, Open, & Ancient Geospatial Datasets." *Center for Open and Reproducible Science (CORES) Annual Meeting.* Stanford University, Stanford, CA.

[Poster] Lamar, Annie K. (2023, May) "Measuring the Impact of Data Augmentation Algorithms for Extremely Low-Resource NMT." *Stanford Data Science Annual Conference*. Stanford University, Stanford, CA.

[Presentation] Lamar, Annie K. (2022, October). "Tiny Data." *Critical Data Practices Symposium*. Stanford University, Stanford, CA.

[Paper] Lamar, Annie K. (2022, August). "Introducing Classical Atlas: A Python Package for Low-Resource Ancient Geospatial Datasets." *The Connected Past: Networks in the Archaeology of the Ancient Aegean*. Heraklion, Crete, Greece.

[Poster] Lamar, Annie K. (2022, April). "DNA of Ancient Epic: Dynamic Systems for Homeric Poetry." 2022 Stanford Data Science Inaugural Conference. Stanford University, Stanford, CA.

[Presentation] Lamar, Annie K. (2020, October). "AI Methods for Homeric Greek." *Data Practices Challenge*. Center for Textual and Spatial Analysis, Stanford University, Stanford, CA.

[Presentation] Lamar, Annie K. (2018, April). "Data and Scholarship for Emerging Classical Sub-Fields." *Northwest Undergraduate Conference on the Ancient World.* Willamette University, Salem, Oregon.

[Presentation] Lamar, Annie K. (2018, March). "Creating a Database for Scholarship in Classical Receptions of Sci-Fi and Fantasy." 48th Annual Meeting of the Classical Association of the Pacific Northwest. University of Puget Sound, Tacoma, WA.

[Presentation] Lamar, Annie K. (2018, November). "I, Cicero: Low-Resource Neural Machine Translation of Ancient Languages." Murdock College Science Research Conference. Vancouver, WA.

• John Van Zytveld Physical Sciences Award 2018

[Presentation] Lamar, Annie K. (2018, November). "Better Late than Never: Cancellation Trends in the Writing Center." *National Conference on Peer Tutoring in Writing*. South Padre Island, TX.

[Paper] Lamar, Annie K., Chambers, America. (2018, October). "Preserving Persona through a Pivot Language: Low-Resource NMT of Ancient Languages." *IEEE MIT Undergraduate Technology Conference*. MIT, Boston, MA.

[Poster] Lamar, Annie K., Chambers, America. (2018, October). "Persona Preservation in a Low-Resource Neural Translation Task." *Consortium for Computing Sciences in Colleges (CCSC) Northwestern Regional Conference*. University of Washington, Bothell, WA.

[Poster] Lamar, Annie K., Chambers, America. (2018, September). "Preserving Persona through a Pivot Language: Low-Resource NMT of Ancient Languages." *Summer Research Symposium*. University of Puget Sound, Tacoma, WA.

• Best Research Poster Award

[Presentation] Lamar, Annie K. (2017, Nov.). "Becoming Augustine: Creating Network Graph of Texts from Plato to Augustine." *Pacific Northwest Undergraduate Conference in the Humanities*. North Idaho University, Coeur d'Alene, ID.

Leadership & Academic Service

Workshop Coordinator, Stanford Humanities Center Research Workshop Series

2021 - present

2022-23 Workshop Title: "Critical Data Practices"

2021-22 Workshop Title: "The Future of the Past: Classics and Technology"

- Manage a \$9,000 budget for catering, room reservations, transportation costs, and speaker fees for up to three events each quarter.
- Select and invite speakers for workshop events; coordinate transportation and presentation needs.

• Promote diversity in both speaker selection and audience by inviting scholars from underrepresented backgrounds, new or junior faculty, and graduate students to speak, and marketing events to identity-based groups and equity-focused research labs on campus.

Grad Student Coordinator, Wellness Information Network for Grad Students (WINGS) 2020 – present

- Plan and coordinate 4-6 wellness events for department graduate student community each year.
- Curate wellness resources for graduate students and provide referrals to Stanford offices.
- Collaborate with wider wellness network at Stanford to provide spaces for inter-department connections.
- Coach graduate students to develop classroom environments and policies to promote student wellness

Open-Source Software

FoodFrame: Standardize. Analyze. Impact. [Project] [2023]

Authors: Annie K. Lamar & Tushar Dalmia

Created with non-project food banks in mind, FoodFrame joins data from several national databases to create a nutrition and sustainability profile for large food datasets. You can easily visualize the nutrition categories of a food supply or calculate the amount of food waste prevented by using or donating food sources.

Pyth-agora: Modeling the Impact of Social Networks around Market Spaces and Market Outcomes [Project] [2023]

Authors: Annie K. Lamar & Sarah Wilker

Pyth-agora is a code repository for modeling the impact of select types of social networks on production and consumption outcomes. The purpose of this multidimensional social landscape is to test the impact of different types of social relationships on what individual agents buy and sell, and how these individual transactions build over time to create long-term production and consumption trends.

Classical Atlas: A Python Package for Open-Access Geospatial Datasets [Project, Docs] [2021]

Authors: Annie K. Lamar

Classical Atlas allows geospatial historians to work with data from several linked open-access Geospatial datasets, which are often presented in inconsistent, unstable, or difficult formats. Currently both Pleiades and ToposText are supported. With a single method call, researchers can download, parse, and transform millions of rows of data into a network graph or DataFrame object, then perform a series of computations upon these objects.

Fellowships & Awards

2023	Stanford Research Computing Humanities Fellow, Stanford Research Computing Center
2022	Digital Humanities Graduate Fellowship, Center for Spatial and Textual Analysis (CESTA)
2021-2023	Data Science Scholar, Stanford Data Science
2019	David A. Lupher Translation Award in Classics, University of Puget Sound
	Edward Goman Award in Computer Science, University of Puget Sound
	Roderick MacArthur Superior Honors Thesis Award, University of Puget Sound
2018	Phi Beta Kappa
	Phi Beta Kappa James R. Slater Award University of Puget Sound
	Upsilon Pi Epsilon
2015-2019	Lillis Foundation Scholarship, University of Puget Sound

Undergraduate Research Fellowships

McCormick Scholar Research Grant, University of Puget Sound

2018

Project: "Using Neural Machine Translation to Complete Cicero's *Timaeus*."

Using Cicero's half-completed translation and other texts Cicero translated from Greek to Latin as training sets, I used neural machine translation to approximate the incomplete portions of Cicero's translation of *Timaeus*.

Richard Bangs-Collier Interdisciplinary Research Grant, University of Puget Sound

2017

Project: "Becoming Augustine: A Network Graph of Texts from Plato to Augustine."

Created a network graph to show connections between the texts of Augustine, neo-Platonian, Plato, and biblical sources to show the history of Augustine's ideas, especially regarding free will and original sin. <u>Available here</u>.

Mellon Grant for Digital Humanities, University of Puget Sound

2017

Project: "Towards a Database for Scholarship on Classical Receptions of Sci-Fi and Fantasy." Collaborated with sub-field experts to create a database to hold citations to scholarship for the field of Classical Receptions of Sci-Fi and Fantasy.