

Emily Grabowski

Curriculum vitae
Last updated 2/1/24

EDUCATION

- May 2024 **PhD in Linguistics and Graduate Certificate in Applied Data Science**
University of California, Berkeley
Dissertation: *Acoustic measurement in phonetics: current practices and future directions*
Committee: Keith Johnson, Gasper Begus, Hannah Sande, Gopala Anumchapalli
- 2021 **MA in Linguistics**
University of California, Berkeley
Thesis: *Comparison of the influence of f0 and intensity on duration judgments in a speech and non-speech task*
Committee: Keith Johnson and Susanne Gahl
- 2018 **A.B. cum laude in Linguistics and Mathematical Data Science**
Dartmouth College
Thesis (High Honors): *Voice Quality and Tone in Santo Domingo Albarradas Zapotec*
Committee: James Stanford and Laura McPherson

EXPERIENCE

- 2019-present **Senior Data Science Fellow**, Social Sciences D-Lab @ UC Berkeley. Duties include instructing data science workshops, developing and consulting on curriculum improvements, training new instructors.
- 2023 **Qualitative Research Analyst**, FLOSS Project @ UC Berkeley. Lead qualitative analysis of workshop surveys and generated insights regarding the efficacy of the program.
- 2020-2021 **Research Assistant**, ChangLab @ UC San Francisco. Duties included designing stimuli for neurolinguistic speech experiments, analyzing ECoG data, and connecting insights to linguistic theory.

SKILLS

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| Deep learning | PyTorch, transformers, experimental design, benchmark development, dimensionality reduction |
| Linguistic analysis | data processing, semi-automated alignment, feature design, acoustic transformations |
| Data science | Pandas, scikit-learn, seaborn, matplotlib, data wrangling, visualization, GitHub |

PUBLICATIONS

- 2023 Methodological trends in acoustic phonetic analysis. Emily Grabowski. *Proceedings of the 20th International Congress of Phonetic Sciences*. ([link](#))
- 2023 Emily Grabowski and Jennifer Kuo. Comparing k-means and OPTICS clustering algorithms for identifying vowel categories. *Proceedings of the LSA 2023*. ([link](#))

2019 DAPPr: A (semi)-automated tool for pitch annotation. Emily Grabowski and Laura McPherson. *Proceedings of the 19th International Congress of Phonetic Sciences*. ([link](#))

MANUSCRIPTS

in prep *Acoustic measurement in phonetics: current practices and future directions*. Emily Grabowski.

- Used neural net probing experiment to evaluate the role of context in phonetic task
- Designed benchmark measure to compare different acoustic representations
- Proposed new direction for integrating phonetic theory and neural net representations

CONFERENCE PRESENTATIONS

2023 *Methodological trends in acoustic phonetic analysis*. Emily Grabowski. Talk presented at the 2023 International Congress of Phonetic Sciences, Prague, Czechia.

2023 *Comparing k-means and OPTICS clustering algorithms for identifying vowel categories*. Emily Grabowski and Jennifer Kuo. Talk presented at the 2023 LSA Annual Meeting, Denver, Colorado, USA.

2022 *Differential effects of pitch on perceived duration in linguistic and auditory tasks*. Emily Grabowski, Poster presented at the 182nd meeting of the Acoustical Society of America, Denver Colorado, USA.

2018 *ATLAS (Automated Tone Level Annotation System): A tonologist's toolkit*. Emily Grabowski and Laura McPherson. Talk presented at the Sixth International Symposium on Tonal Aspects of Languages. Berlin, Germany.

2017 *Tone sandhi in Teochew: new phonetic data from overseas speakers*. Emily Grabowski. Talk presented at the 2nd International Symposium on Chinese Applied and Theoretical Linguistics. Milan, Italy.

2017 *Voice quality in Santo Domingo Albarradas Zapotec*. Emily Grabowski. Talk presented at the 2nd SLUGS (Society of Linguistic Undergraduates) Undergraduate Research Symposium. Berkeley, CA.

2017 *Automated tone level annotation in the documentation of New Caledonian tone*. Laura McPherson and Emily Grabowski. Talk presented at the 9th International Austronesian and Papuan Languages and Linguistics Conference. Paris, France.

2017 *A semi-automated workflow for producing time-aligned intermediate tonal representations*. Laura McPherson and Emily Grabowski. Talk presented at the 5th International Conference on Language Documentation and Conservation. Honolulu, HI, USA.

SOFTWARE AND PROJECTS

2023 Simple Survey Builder, command-line Python tool for surveying journal articles ([link](#))

2019 DAPPr: Dartmouth tool for Analysis of Pitch and Prosody. ([link](#))

TEACHING EXPERIENCE

2019-present	Senior instructor, Social Sciences D-Lab, UC Berkeley. Python Workshops taught: Fundamentals (12 hrs), Data Wrangling and Data Visualization (6 hrs), Machine Learning (6 hrs), Deep Learning (6 hrs), Text analysis in Python (12 hrs). R Workshops taught: Fundamentals (12 hrs), Deep Learning (6 hrs). Redeveloped: Python Fundamentals, Python Machine Learning, Python Data Wrangling and Visualization. Co-developed: New Instructor Training Workshop (4 hrs)
2022-2023	Instructor, Workshop in Data Science and Social Justice (8-week summer workshop for graduate students, two summers), UC Berkeley.
2020	Teaching assistant, Bay Area Summer Institute in Computational Social Science. (2-week summer school).
2016	Teaching assistant, Introduction to Linguistics, Dartmouth College.

INVITED TALKS

2022	<i>From text to numbers</i> , Undergraduate computer science course, Lewis & Clark College.
2022	<i>Introduction to deep learning for text analysis</i> , Computational Training in Social Science Program, three-hour module, UC Berkeley.
2019	<i>Effects of pitch on perceived duration</i> , University of Washington Phonetics Lab meeting.

WORKSHOPS AND TRAINING

2024	URSSI Winter School, Three day intensive on research software engineering, Portland, OR
2023	Scholars-in-Training workshop 2023, Academic Data Science Alliance, San Antonio, TX
2022	Acoustical Society of America School 2022, Denver Colorado, USA

HONORS AND AWARDS

2018	Academic Achievement Award in Linguistics, Dartmouth College
2017	Neukom Institute Prize for Outstanding Undergraduate Research in Computational Science, First Place

FELLOWSHIPS AND GRANTS

2023	Travel Grant, Academic Data Science Alliance Annual Meeting, San Antonio, Texas, USA.
2023	Invitation and Travel Grant, Academic Data Science Alliance Leadership Summit, Boston, Massachusetts, USA.
2022	Travel Grant, Biological and Environmental Data Education Network Meeting, Montreal, Canada.
2022	Travel Grant, AudioXD workshop, Pittsburgh, Pennsylvania, USA.
2019-2022	National Science Foundation Graduate Research Fellowship.
2017-2018	Stamps Charitable Foundation Scholar Experiential Learning Grant. <i>Project: Tone sandhi in Teochew.</i>
2017	Honors thesis and leave-term research grants from the Leslie Embs Bradford 1977 and Charles C Bradford Fund for Undergraduate Research, Dartmouth College.
2017	Office of Undergraduate Advising and Research Conference Travel Award, Dartmouth College
2016-2017	Neukom Foundation Scholar and James O. Freedman Presidential Scholar Project: Computational tool for the analysis of tone (ATLAS)
2016	Center for the Advanced Study of Language (CASL) Summer Language Science Scholar. Project: Designing methods to crowdsource data for online language map. Advised by Tess Wood.

MENTORSHIP

2022-present	Mentor for new workshop instructors, D-Lab, UC Berkeley. Two cohorts of 12 graduate students.
2019-2020	Language Research Apprentice Program, UC Berkeley. Mentored two undergraduates on experimental procedures. Project: Effect of f0 on perceived duration of tone
2019-2020	Data Science Discovery Project partner, UC Berkeley. Mentored a team of six undergraduates to develop a neural net processing pipeline. Project: Exploring automatic phonetic transcription

SERVICE

2023	Co-coordinator, Practical Programming Working Group, D-Lab
2022-2023	Coordinator, Phonetics reading group at UC Berkeley.
2019-2020	Organizer, Phorum speaker series at UC Berkeley
2019	Organizing committee, Berkeley Linguistics Society Workshop