

Sunkulp Ananthanarayan (any pronouns)

University of Texas | Department of Linguistics

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Research Interests

- Language documentation
- Sociolinguistics, esp. variationist
- Indigenous and minoritized language activism
- Computational linguistics
 - Web implementations of analysis tools
 - Tools for documentation and description contexts
 - Machine learning for NLP
 - Computational statistics
- Linguistic typology

Education

- 2021 **Linguistics**, University of Texas at Austin (GPA: 3.7608)
Certificate: Elements of Computing
- 2018 **Semester Exchange**, Australian National University (GPA: 4.0000)
Coursework:
Advanced Sociophonetics
Qualitative Methods in Linguistics
Learning an Indigenous Australian Language (Gamilaraay)
Dictionaries and Dictionary Making
Field Methods (Motu)

Work and Research Positions

Research positions

- 2017-2020 **Research Assistant**. Naduhup Documentation Research Group.
Supervisor(s): Dr. Patience Epps
Organization: The University of Texas at Austin
- Reformatted dictionary, fixing encoding problems and inconsistencies, and incorporated it into a database
 - Conducted analyses about historical contact and evolution of Naduhup languages
- 2018-2019 **Research Assistant**. Bilingual Annotation Task Force.
Supervisor(s): Drs. Jacqueline Toribio and Barbara Bullock
Organization: The University of Texas at Austin
- Validated annotations of code-mixed language texts
 - Vectorized and reduced dimensionality of texts and applied biological and statistical models to propose analyses about code-mixing

- 2018 **Visiting Fellow.** Matukar Panau Phonetic Variation Project.
 Organization: The ARC Centre of Excellence for the Dynamics of Language
- Cleaned minority language data and pruned it for primary investigation to find points of interest
 - Created pronunciation dictionary of annotated dataset
 - Modelled audio to create automated text alignment with audio
 - Ran algorithm for recursive performance of alignment
 - Programmed statistical models to understand the sociolinguistic scene of this language

Work positions

- 2020-2021 **AI Specialist Intern.** Appen Butler-Hill.
- Researched industry standards for user behavior data evaluation
 - Mapped text-based data into abstracted web ontology
 - Compared knowledge graphs of varied texts
- 2016-Pres. **Spanish Tutor.** Independent.
- Practiced conversational Spanish with students in one-on-one and group settings
 - Generated and executed lesson plans for students just beginning learning Spanish both with and without formal lessons, as well as those with experience
 - Worked with students to reach writing and comprehension goals
- 2016-Pres. **Hindi Tutor.** Independent.
- Leveraged linguistics experience in comparing Hindi and English patterns to augment learning beyond basics
 - Practiced conversational Hindi with students in small scale tutorials
- 2019 **Machine Learning Instructor.** iD Tech.
- Redesigned faulty curriculum for teenager-oriented machine learning lessons
 - Led classes through tutorials about machine learning algorithms and implementations
 - Guided students in individual projects utilizing what they learnt
- 2018 **Primary Web Developer.** Gamilaraay (Kamilaroi) Revitalization Project.
- Consulted with indigenous community representatives to design a site oriented toward cultural preservation
 - Recycled and revamped existing designs to better match the specification
- 2017 **Programming Instructor.** Wize Academy.
- Created a curriculum of lessons to teach coding aimed towards Minecraft
 - Led ten lessons in programming for a class of 9 children
- 2016 **Theatre Camp Counselor.** New Age Montessori School.
- Ran a weeklong theatre camp for young children (elementary school)
 - Directed a short play, incorporating the students' ideas consistently
 - Planned curriculum to integrate with teaching blocking and acting for the play

Relevant Coursework

2016	<i>Intensive Nahuatl</i>
2017	<i>Dying Languages: What World Linguistic Diversity Means for Us</i>
2017	<i>K'ichee' Peoples: Culture/History/Language</i>
2017	<i>Elements of Software Design</i>
2018	<i>Field Methods</i>
2019	<i>Language Contact (Graduate course)</i>
2020	<i>Elements of Software Engineering</i>

Workshops and Reading Groups

Workshops

2019	<i>Phylogenetics: Computational Historical Linguistics</i> . Host: Claire Bowerman. Yale University. Linguistic Society of America Annual Meeting
2019	<i>Documenting Multilingualism</i> . Hosts: Lenore Grenoble, University of Chicago and Jack Martin, University of William & Mary. Linguistic Society of America Annual Meeting.
2018	<i>Using your own language data for speech recognition</i> . Host: Daan van Esch, Google. University of Melbourne.
2018	<i>Directionality and Associated Motion Workshop</i> . Host: Harold Koch, Australian National University. Australian National University.
2018	<i>Working in Tech—It's Not Just for Computational Linguists</i> . Hosts: Samantha Beaver, Memra Language Services; Sam Cooper, NoRedInk; Christopher Stewart, Google; Frankie Pennington Sensory, Inc.; Brent Woo, Amazon. Webinar by Linguistic Society of America's Linguistics Beyond Academia Special Interest Group
2018	<i>Support Vector Machines as a Sociolinguistic Tool</i> . Host: Tyler Kendall, University of Oregon. New Ways of Analyzing Variation (NWAV) 47
2017	<i>Sociophonetics Workshop: Big Data and Social Research</i> . Host: Malcah Yaeger-Dror, University of Arizona. University of Texas at Austin.

Groups and Seminars

2020-Pres.	<i>Formal approaches to morphology</i>
2019-Pres.	<i>Construction grammar reading group</i>
2017-Pres.	<i>Graduate seminar for research in documentary/descriptive linguistics</i>
2016-Pres.	<i>University of Texas Undergraduate Linguistics Society</i>
2018	<i>Grammar writing</i>
2018	<i>Language evolution and change</i>

2018 *Programming in R for linguistics*

2018 *Phonetics discussion*

Awards and Grants

2020 **Unrestricted Endowed Presidential Scholarship** (Office of Financial Aid and Scholarship).

2019 **President's Award for Global Learning** (International Office).

2019 **Unrestricted Endowed Presidential Scholarship** (Office of Financial Aid and Scholarships).

2018 **Liberal Arts Honors Upper Division Scholarship** (Liberal Arts Honors).

2018 **Transdisciplinary Innovation Grant** (The Centre of Excellence for the Dynamics of Language).

2018 **Undergraduate Research Scholarship** (School of Undergraduate Studies).

2018 **Undergraduate Research Apprenticeship Program** (College of Liberal Arts).

2018 **Liberal Arts Honors Research/Conference Award** (Liberal Arts Honors).

2017 **Liberal Arts Honors Scholarship** (Liberal Arts Honors).

2017 **Liberal Arts Undergraduate Research Scholarship** (Office of the Vice President for Research).

2017 **Liberal Arts Undergraduate Research Scholarship** (Office of the Vice President for Research).

2017 **Liberal Arts Honors Upper Division Scholarship** (Liberal Arts Honors).

2017 **Scholarship for Exchange Programs** (College of Liberal Arts).

Conference Presentations

2019 Ananthanarayan, Sunkulp, Eri Kashima, Siva Kalyan, and Naomi Peck. Feb. 2019. **Linguistic Cartography: Mapping Linguistic Theory**. Presented at The Texas Linguistics Symposium, Austin, Texas, United States

2019 Epps, Patience and Sunkulp Ananthanarayan. Jan. 2019. **Society for the Study of the Indigenous Languages of Latin America (SSILA 2019). Stability in grammatical morphology: A Naduhup case-study (Amazonia)**. Presented at The Society for the Study of the Indigenous Languages of the Americas, New York City, New York, United States

- 2018 Ananthanarayan, Sunkulp. Feb. 2018. **Documentation of Dâw and Tools for Comparative Analysis**. Presented at Centre of Excellence for the Dynamics of Language (CoEDL) Fest, Melbourne, Victoria, Australia
- 2018 Ananthanarayan, Sunkulp, Eri Kashima, Siva Kalyan, and Naomi Peck. July 2018. **Linguistic Cartography: Mapping Linguistic Theory**. Presented at CoEDL ANU Linguistics Seminar, Canberra, ACT, Australia
- 2018 Gonzalez, Simon, Catherine Travis, James Grama, Danielle Barth, and Sunkulp Ananthanarayan. Dec. 2018b. **Recursive forced alignment: A test on a minority language**. Presented at Speech Science and Technology Conference (SST2018), Sydney, New South Wales, Australia
- 2018 González, Simón, James Grama, Sunkulp Ananthanarayan, Danielle Barth, and Catherine Travis. Oct. 2018. **Opening the door for forced-alignment to minority languages**. Paper presented at *New Ways of Analyzing Variation 47*, New York City, New York, United States
- 2017 Aguirre, A., S. Ananthanarayan, E. Frazier, N. Grant, K. Hall, R. Law, and L. Wagner. May 2017a. **From Documentation to Community Resources: Developing Pedagogical Materials for Naduhup Languages in Northwestern Brazil**. Paper presented at UT Undergraduate Research Bazaar, Austin, Texas, United States
- 2017 Aguirre, A., S. Ananthanarayan, E. Frazier, N. Grant, K. Hall, R. Law, and L. Wagner. May 2017b. **From Documentation to Community Resources: Developing Pedagogical Materials for Naduhup Languages in Northwestern Brazil**. Paper presented at UT Undergraduate Linguistics Research Symposium, Austin, Texas, United States
- 2017 Ananthanarayan, Sunkulp. Oct. 2017a. **Documenting Dâw**. Undergraduate Research Showdown Research Communication Competition, Austin, Texas, United States
- 2017 Ananthanarayan, Sunkulp. Nov. 2017b. **Invited Lecture: Dâw Fieldwork**. Presented at Seminar in Language and Culture in Amazonia, Austin, Texas, United States

Publications and Write-ups

- Forth-coming Epps, Patience and Sunkulp Ananthanarayan. Forth-coming. **Stability in grammatical morphology: An Amazonian case-study**. *Diversity in Language Change: Historical Linguistics and Endangered Languages*. Ed. by Patience Epps, Daniel Law, and Na'ama Pat-El. Series in Historical Linguistics. Routledge
- In prep. Barth, Danielle, Sunkulp Ananthanarayan, and Simón González. In prep. **The Sociolinguistic Scene of Matukar Panau**

- 2018 Gonzalez, Simon, Catherine Travis, James Grama, Danielle Barth, and Sunkulp Ananthanarayan. 2018a. **Recursive forced alignment: A test on a minority language**. *Proceedings of the 17th Australasian International Conference on Speech Science and Technology*. Ed. by Julien Epps, Joe Wolfe, John Smith, and Caroline Jones, pp. 145–148
- 2017 Ananthanarayan, Sunkulp. 2017c. **Undergraduate Spotlight: Sunny Ananthanarayan**. Webpage. URL: <https://liberalarts.utexas.edu/linguistics/about/newsletters/fall-2018/ananthanarayan-newsletter-feature-fall-2018.php>

Service

Conference work

- Volunteer Conference on the Indigenous Languages of Latin America (2019)
- Volunteer Hispanic Linguistics Symposium (2018)
- Volunteer Linguistic Society of America Annual Meeting (2017)
- Moderator Conference on the Indigenous Languages of Latin America (2017)

Event organization

- Organizer International Year of Indigenous Languages 2019 Wikipedia Edit-a-thon (2019)
- Organizer Indigenous Arts Fest (2018)
- Organizer Indigenous Arts Fest: Pachamamanchikwan Kawsakunchik (2017)

Departmental Service

- President UT Austin Undergraduate Linguistics Society (2019)
- VP UT Austin Undergraduate Linguistics Society (2018)

Other

- Editor Wikimedia projects, esp. Wikipedia and Wiktionary; active participant in Edit-a-Thons (2014-Pres.)
- Producer Foot in the Door Theatre Troupe (2017-2020)
- Technician Foot in the Door Theatre Troupe (2016-2020)
- Technician Creative Arts+Theatre UT Austin (2016-2020)
- Director Hitch-Hiker's Guide to the Galaxy Stage Adaptation (2019)

Other Professional Activities & Skills

Fieldwork

2017 Dâw (Naduhup). Waruá/São Gabriel da Cachoeira, Amazonas, Brazil; Pedagogical material creation, lexicography, recent and distant history documentation, material culture documentation.

Professional Memberships

2019-Pres. LSA Committee on LGBTQ+ Issues in Linguistics (COZIL)
 2019-Pres. LSA Committee on Ethnic Diversity in Linguistics (CEDL)
 2019-Pres. Committee on Gender Equity in Linguistics (COGEL; formerly COSWL)
 2017-Pres. Society for the Study of the Indigenous Languages of Latin America (SSILA)
 2016-Pres. Linguistic Society of America (LSA)
 2018-2019 LSA LGBTQ+ Issues in Linguistics Special Interest Group
 2016-2018 LSA Committee on AP Linguistics

Languages

English, Native
 Latin American Spanish, Fluent
 Brazilian Portuguese, Advanced conversational
 Spoken and Written Hindi (Heritage), Conversational
 Spoken Marathi (Heritage), Intermediate
 Classical Latin, Intermediate
 Intermediate reading and listening capability in various other Italo-Western Romance languages, as well as German.

Software

SIL's Field Language Explorer, Proficient
 SIL's Toolbox, Proficient
 ELAN Audio and Text Annotation, Proficient
 Praat, Proficient
 Montreal Forced Aligner, Proficient
 Jupyter Notebooks, Proficient
 Git (GitHub, GitLab), Proficient
 Lawrence Antony's AntConc Concordancing Tool, Basic Mastery

Programming and Markup Languages

Python, Proficient
 Modules:
 – `pandas`
 – `sklearn`

- flask

R, Proficient

Libraries:

- tidyverse
- ggplot

L^AT_EX, Proficient

Packages:

- Linguistics (qtree, expex/gb4e, tipa, etc.)
- Mathematics and logic (amsmath, tikz, etc.)

HTML5, Proficient

JavaScript & JQuery, Intermediate

CSS & Bootstrap CSS, Intermediate

Praat scripting, Intermediate

MediaWiki markup, Intermediate

Shell scripting, Basic familiarity

PHP3, Basic familiarity

MySQL, Basic familiarity

Other technical skills

Machine learning model architectures

Regular Expressions

Propositional, Predicate, and Modal logic

Set theory

Semantic Web, Knowledge Graphs, and Ontologies

- Resource Description Framework (RDF)
- Web Ontology Language (OWL)
- RDF-Schema
- Manchester, Turtle, XML, and JSON Syntax for KGs and Ontologies
- Upper-level ontologies such as DOLCE (and extensions DL+, DnS, Collections and Collectives, Social Units, and cDnS)

Agile development

Extreme Programming