Tyler W. Carson

San Jose, CA · tyler.w.carson@gmail.com · (909) 756-5942

linkedin.com/in/twcarson · github.com/yzgncx · inaturalist.org/people/t-w-carson

PROJECTS

Biodiversity Inventory of Under-documented area in Kern County

- Conducted an ongoing, self-directed biodiversity inventory of an under-documented region along the South Fork of the Kern River Valley, roughly corresponding with the bounds of Onyx, CA.

- Recorded roughly 1000 observations using iNaturalist, including over 150 unique plant species. Created and maintained a checklist page for the region to track likely and confirmed taxa.

- Documented several rare and uncommon species, as well as several species at the extreme edges of their known range.

- Relocated rare species based on the descriptions and geolocations provided in herbarium collections.

Dichotomous Key Tools (work in progress)   *Python*

- Designed and implemented a code base to introduce useful functionalities to dichotomous keys, including interactive key traversal, key filtering based on arbitrary data (for example: geolocation, native status, etc), and nearest ancestor of two leaves.

- Created key parser for plaintext from Jepson eFlora pages, with the goal of implementing webpage parsers for Jepson and other popular online floras.

- Goals for the project include creating a web interface and integrations with other online tools such including iNaturalist and Calflora.

Phonological Analysis of Uyghur Language   *Python, Excel*

- Implemented corpus data processing tools including regex search tool, Arabic/Latin transliterator, and text processing.

- Performed statistical analysis of written Uyghur corpus, analyzing properties of vowel harmony.

- Constructed a web scraper using Python's Scrapy module to generate a corpus of written Uyghur.

WORK EXPERIENCE

Sensory, Inc.   Portland, OR (remote)
Product Linguist   May 2023 - May 2025

- Created, documented, and maintained internal software tools written in Python and Bash.

- Trained and tested production artificial neural networks built for wake word and command recognition.

- Applied linguistic and phonetic expertise and research methods to analyze speech spectrograms and curate audio datasets.

- Used research methods to find optimal model parameters and best practices for data curation.

- Balanced the work of several simultaneous projects with tight deadlines.

SoundHound, Inc.   Santa Clara, CA
Linguistic Engineer   Aug 2021 - Jan 2023

- Created experimental and production acoustic models for several languages, often delivering models on tight time-frames. Produced scripts to automate and streamline multi-step training processes.

- Led meetings and coordinated presentations for a team of engineers and linguists.

Language Data Specialist   Mar 2020 - Aug 2021

- Designed, set up, and maintained a MySQL database for cataloging text and audio data used in creating text to speech models; designed and wrote a web tool for speech data collection.

- Trained and debugged automatic speech recognition models, testing performance with statistical methods.

English Data Intern   Aug 2019 - Mar 2020

- Organized and led scripting lessons and office hours for other interns and team members.

- Developed a collection of tools in Python for scraping and conditioning text data for use in a linguistic corpus.

Skills

Tools / Environments:	ARCGis, Excel, Microsoft Office, Windows, Survey123, UNIX, Git, LaTeX
Field Skills:	Plant Identification, Specimen Collection, Seed Collection, Backpacking, Map & Compass Navigation, Off-road Driving
Programming Languages:	Python, R Studio, SQL, Bash, C, C++
Natural Languages:	English (fluent, native)
	Spanish, German (basic proficiency)

Other Relevant Experience

BLM AIM Survey Volunteer	2025	Volunteered in data collection and reporting for BLM Assessment Inventory and Monitoring of wetland plots in Santa Cruz County.
Invited Speaker	2024	Presentation to the San Jose Cactus and Succulent Society on the topic of floral biodiversity in California's desert and chaparral ecosystems.
Invited Speaker	2023	Presentation to the San Francisco Succulent and Cactus Society on seed collection and propagation.

Education

University of California, Los Angeles — Los Angeles, CA

M.A. Linguistics — Sep 2018 - Jun 2019

B.A. Linguistics and Computer Science — Sep 2015 - Jun 2019

Coursework

Statistics · Research Methods · Programming Languages · Algorithms · Computational Linguistics