

# Rayyan Merchant

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🐦 @rayyanmerchan

in Rayyan Merchant


🌐 <http://merchantrayyan.github.io/>



## Education

- 2019 – December 2023     **University of Florida, Gainesville, FL**  
B.Sc. Computer Science, B.A. Linguistics  
GPA: 3.63/4.00
- Apr. - Aug. 2022     **RWTH Aachen, Aachen, Germany**  
Spring Semester Exchange


## Research Experience

- 2019–Present     **Speech, Lexicon, and Modeling Laboratory**  
Undergraduate Researcher (<https://slam.phil.hhu.de>)  
Supervisor: Dr. Kevin Tang
- Utilizing neural models to attempt translation through transliteration between Iranian/Afghan Persian and Tajik Persian, written in the Perso-Arabic and Tajik-Cyrillic scripts, respectively
  - Examining ways to computationally detect differences between dialects of Spanish through analyzation of Spanish-language corpora with text collected from the Internet and subtitles
  - Wrote code in Python to automate Internet text mining, as well as filter, split, and analyze corpora



## Research Presentations

- 1 **Rayyan Merchant** and Kevin Tang, “Connecting the Persian-speaking World through Transliteration,” The 3rd North American Conference in Iranian Linguistics, Los Angeles, CA., Apr. 2023, 20-minute talk with 10-minute QA.
- 2 **Rayyan Merchant** and Kevin Tang, “Translating through transliteration: the case of Tajik Persian,” The 98th Annual Meeting of the *Linguistic Society of America*, Denver, Colorado., Jan. 2023, Poster available to view [online](#).
- 3 **Rayyan Merchant**, Kevin Tang, and Akhilesh Ramarao, “Machine Transliteration between two Persian Dialects - The Case of Farsi and Tajiki,” 32nd Tagung der Computerlinguistik-Studierende (TaCoS), Düsseldorf, Germany., Jun. 2023, 20-minute talk with 10-minute QA.




## Projects

- 2021     **A Simulation Study Exploring the Role of Pronouns in Gender Stereotypes**  
LIN4930 (Comp. Ling.) Final Project
- With a team member, brainstormed, planned, and carried out an original research project.
  - Investigated the impact of pronouns on gender bias by making gendered pronouns gender-neutral (singular ‘they’ and neopronoun ‘ze’) and measuring the association between gendered words and occupations with word embeddings.

## Additional Experience

- June, 2023 - Present     **Machine Learning for Endangered Language Documentation (MELD) Laboratory**  
*Paid Annotation Assistant*
- Annotating African American oral histories for grammatical features of African American English, to be used for NLP tools for African American English
- Aug. 2021 - Mar. 2022     **George A. Smathers Libraries at U.F.,**  
*Paid Transcription Assistant (20 hrs/week)*
- Manually transcribed, organized, and summarized interviews as part of the Native American Oral History Project funded by the Doris Duke Charitable Foundation.

## Skills

- Languages     English (native), Spanish (proficient), Portuguese (proficient), German (proficient), Persian (proficient), Turkish (conversational), Urdu (conversational), Konkani (conversational)
- Coding     Python, C++, Java, R, SQL
- Libraries     NLTK, Pandas, ScraPy, JoeyNMT, Matplotlib, NumPy, SpaCy


## Awards

- 2023     **Summer Undergraduate International Research Program**  
\$5,000 scholarship to conduct thesis research at Heinrich-Heine University in Germany
- 2022, 2023     **Wentworth Travel Scholarship**  
\$500 scholarship from UF Honors for conference travel and studies at the Belgian Carillon School
- 2021     **University Scholars Program**  
One of 200 students across UF selected to work one-one-one with a faculty member on a research project of the student's choice with a \$1,750 stipend
- 2020     **Boren STEM Summer Scholarship**  
\$8,000 State Department scholarship to study Tajik Persian in Tajikistan  
*Canceled due to COVID*
- 2019     **University Research Scholars Program**  
Invitation-only introductory research program at UF
- 2018     **Benacquisto Scholarship**  
Full-ride scholarship as National Merit Finalist for estimated cost of attendance at UF
-  **National Security Language Initiative for Youth (NSLI-Y)**  
State Department scholarship to study Tajik Persian in Tajikistan
- 2017     **Eagle Scout**

## Miscellaneous Experience

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### Volunteering

- 2023-Present      **Samuel Proctor Oral History Program,**
- Conducting and manually transcribing oral history interviews
  - Manually annotating transcripts for African American English grammatical features

### Certification

- 2020      **Advanced Low in Tajiki (Tajik Persian).**  
Awarded by the American Council on the Teaching of Foreign Languages

### Music

- 2021-Present      **Carillon**  
Play the carillon in UF's Century Tower under the tutelage of Dr. Laura Ellis. Also received instruction from Luc Rombouts of the Belgian Royal Carillon School.
- 2015-2019      **Classical Voice**  
Participated in high school choir all four years, making it to the Florida All-State Concert Choir twice and achieving Superiors at Florida Vocal and Ensemble three times.