

Rui Hu

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EDUCATION

Northern Arizona University, Flagstaff, AZ 08/2019 - 04/2021
M.A. in Teaching English as a Second Language (TESL)
Emphasis: Applied Linguistics
- Graduated with a GPA of 3.82/4.00 (Top 2%)
- High pass in comprehensive exam (overall score: 2.57; range of scores: 1.65-2.66)
- Established solid understanding regarding linguistics, including phonetics, phonology, morphology, syntax, semantics, pragmatics, discourse analysis, sociolinguistics, corpus linguistics, and natural language processing
- Created and processed datasets, corpora, and models for linguistics-associated tasks
- Analyzed a large amount of language data (written and spoken), identified the best practices and improved procedures for linguistic and computational tasks

The Chinese University of Hong Kong, Shatin, Hong Kong 08/2017 - 05/2018
M.A. in Translation
- Graduated with a GPA of 3.338/4.000 (Top 3%)
- Automated computer-assisted translation and text analysis
- Conducted translation and interpretation tasks of all types of registers

Hunan University, Changsha, Hunan, China 09/2013 - 06/2017
B.A. in English
Second Course Track: Computer Science (credit-based)
Emphasis: Applied Linguistics
Thesis: A Corpus-based Stylistic Study of Advertisements and Business Correspondence
- Graduated with Honors, with a GPA of 4.03/4.50 (Top 1%)
- Awarded National Scholarship twice by the Ministry of Education of China

Arizona State University, Tempe, AZ 08/2016 - 05/2017
Visiting Student - English (Literature)
- Achieved a GPA of 4.00/4.00 (Top 1%)
- Included in the Dean's List in Fall 2016 and Spring 2017
- Honored as the Face of ASU

AWARDS AND HONORS

Graduate Teaching Assistantship 2019-2021
Northern Arizona University, US\$68,000

Teaching Assistant Award 2019
Washington University in St. Louis - ALLEX Teacher Training Institute

Chinese Government Scholarship 2016-2017
China Scholarship Council, US\$13,500
Certificate #201606135107

First Prize at the 3rd National Business English Practice Contest, Final 2015
Ministry of Education, China, CNY1,000/US\$150

National Scholarship 2014-2015 & 2013-2014
Ministry of Education, China
Certificates #2015-13881, #2014-13895; awarded twice, CNY16,000/US\$2,500 in total

Merit Student (Triple-A Student) 2014-2015 & 2013-2014
Hunan University, Changsha, Hunan, China
Certificates #HDSHXS2015742, #SHXS20140760; honored twice

RESEARCH HIGHLIGHTS

Building a Twitter Scraper & a Prototype Dictionary-based Sentiment Analyzer

Northern Arizona University, individual work, 2021

Course: Programming for Text Analysis

Brief Introduction: Created several Python programs and collected Tweets ($N = 3,200$) from Twitter and built a corpus of Tweets, and also a prototype dictionary-based sentiment analyzer and created a scoring system of the sentiment.

Second Language (L2) English Speaker Analysis

Northern Arizona University, individual work, 2020

Course: Introduction to Language and Linguistics

Brief Introduction: Interviewed a non-native English speaker ($N = 1$) and analyzed the speech data at the levels of phonetics and phonology, morphology, syntax, and semantics/lexicon

Characteristics of a Reading Comprehension Assessment:

Measures of Validity and Reliability

Northern Arizona University, collaborative work, 2020

Course: Assessment for Second Language Skills

Brief Introduction: Developed a test to measure native and non-native English speakers' reading comprehension in the context of academic English ($N = 26$)

Native and Non-native Speakers' Perception of American English Dialects

Northern Arizona University, collaborative work, 2020

Course: Sociolinguistics

Brief Introduction: Discussed to what extent both native and non-native speakers perceive different dialects in the US regarding correctness and pleasantness ($N = 54$)

PROJECTS

Natural Language Processing:

- A prototype poetry generator based on Markov model
- A prototype text classifier based on Markov model
- A prototype sentiment analyzer with logistic regression
- A prototype recommender system using non-negative matrix factorization (NMF) and cosine similarity
- Discovering topics (interpretable features) in Wikipedia articles with NMF
- Clustering Wikipedia articles and titles based on a given TD-IDF array in CSR matrix format with k-means
- Latent semantic analysis (LSA) visualization with singular value decomposition (SVD)

Machine Learning:

- Predicting credit card approvals
- Clustering fish species using k-means
- Clustering grain seeds using k-means, hierarchical clustering, and t-distributed stochastic neighbor embedding (t-SNE)
- Predicting handwritten digits: a multi-class classification with k-nearest neighbors (KNN)
- Predicting party affiliation: a binary classification with KNN
- Predicting whether a given Pima Indian will have diabetes: a binary classification with KNN
- Pima Indian diabetes classification using logistic regression
- Discovering variance of the PCA features in fish species
- De-correlating grain seed data and dimension reduction with PCA
- Life expectancy prediction with linear regression

Data Science (Data Analysis and Visualization):

- Analyzing TV data
- Investigating Netflix movies and guest stars in the office
- The Android app market on Google Play

TEACHING
EXPERIENCE

Academies of Mathematics and Science (AMS), South Mountain, Phoenix, AZ
Foreign Language Teacher 07/2021 - Present
- Teach Mandarin Chinese at K-8 levels as a full-time teacher
- Use measurable data to track student performance and enrich their progress with visible results
- Stick to district and Arizona curriculum standards to teach students above and below grade-level through a differentiated approach

Northern Arizona University (NAU), Flagstaff, AZ
Instructor of Chinese 08/2019 - 04/2021
- Taught CHI 101, 102, 201, and 202 as a part-time instructor
- Assisted in curriculum design and management
- Designed curriculum and created test items
- Received exceptional student satisfaction rate

Washington University in St. Louis (WUSTL), St. Louis, MO
WUSTL-ALLEX Teacher Training Institute Practice Teacher 06/2019 - 07/2019
- Co-taught CHI 101 in Summer 2019
- Underwent intensive full-time training included basic principles of effective Chinese language pedagogy, classroom teaching techniques, the linguistic analysis of Chinese

PROFESSIONAL
EXPERIENCE

Center for International Education, NAU, Flagstaff, AZ
Graduate Assistant, *part-time* 08/2019 - 05/2021
- Worked primarily as an international social media content specialist and produced posts regularly on NAU official social media platforms such as WeChat, Weibo, Chinese TikTok (*Douyin*) and RED (*Xiaohongshu*)
- Developed marketing and promotional materials and participated in social media operation by ensuring adherence to NAU social media guidelines and procedures
- Completed other assigned tasks, including but not limited to organizing materials and helping incoming international students find solutions and resources to ease their transition

1000 Internet and Culture Studio, Hunan University (HNU), Changsha, China
Full Stack Developer, *part-time* 12/2013 - 06/2017
- Worked in the core developer team on several projects involving comprehensive expertise in full stack development. Highlight projects include: *Grades Lookup System*, *Incoming Student Orientation*, and *HNU Online Bulletin Board*
- Collaborated closely with technical and non-technical team members, especially designers and content specialists to delivered up-to-date website
- Performed code optimization and code refactoring; built simple, sustainable, and versatile code

Global Launch, Arizona State University (ASU), Tempe, AZ
Chinese - English Interpreter & Translator, *part-time* 09/2016 - 12/2016
- Conducted Chinese-English consecutive interpretation and translation for the visiting scholars from China, PAC-12 professional coaches and experts from ASU, National Collegiate Athletic Association (NCAA) and Pacific-12 (PAC-12)

INTERNSHIP AND
VOLUNTEERING

Yuelu Academy, Changsha, Hunan, China
Chinese History Specialist, Translator, and Interpreter 06/2016

Emperor Qin's Mausoleum Site Museum, Lintong, Xi'an, Shaanxi, China
Chinese History Specialist, Translator, and Interpreter 07/2015 - 08/2015

The French Institute, Embassy of France in China, Beijing, China
Community Interpreter and Tour Guide 12/2014

Government of Hunan Province, Changsha, Hunan, China
Community Interpreter at the China (Changsha) Mineral and Gem Show 05/2014

INTERNAL SERVICE	Master of Arts Public Relations Officer Graduate Student Association of TESL and Applied Linguistics (GSALL) Northern Arizona University, 2019-2021
	Internal Vice-President Postgraduate Association of the Chinese University of Hong Kong (CUPSA) The Chinese University of Hong Kong, 2017-2018
CERTIFICATES	Unsupervised Learning in Python Certificate #21442879 DataCamp, 01/2022 - No expiration
	Supervised Learning with scikit-learn Certificate #21322579 DataCamp, 10/2021 - No expiration
	Data Science: Natural Language Processing (NLP) in Python Certificate #UC-c89dc78f-727f-470b-9759-d774a7758e27 Udemy, 04/2021 - No expiration
	Programming in C - Level II Certificate #24424303089153 Ministry of Education of China, 03/2015 - No expiration
	Putonghua (<i>Mandarin</i>) Proficiency Test - Level 1B Certificate #4314034000159 Ministry of Education of China, 04/2014 - No expiration
	Advanced Application of Microsoft Office - Level II Certificate #65394304928050 Ministry of Education of China, 03/2014 - No expiration
MEMBERSHIPS	Association for Computational Linguistics (ACL) American Council on the Teaching of Foreign Languages (ACTFL) TESOL International Association (TESOL) Chinese Language Teachers Association (CLTA)
LANGUAGES	Native fluency: English, Chinese (Mandarin, Cantonese, Xiang)
	Intermediate level: Spanish, French
	Elementary knowledge: Finnish, Swedish, Japanese, Korean, Malaysian, Indonesian
	Ancient language (reading): Classical Chinese
SKILLS	Programming: Languages: Python, C/C++, Java, Swift, Go Environment: Desktop, Server, Cloud: Amazon Web Services (AWS), Google Cloud Operating system: Linux: Ubuntu & CentOS + terminal commands, macOS, Windows Version Control: Git (GitHub)
	Analysis: Data analysis and visualization: Excel, SPSS, Tableau, R Machine learning: Scikit-learn, SciPy, PyTorch, Tensorflow, Keras
	Web Application Development: Front end: HTML, CSS, JavaScript, jQuery, Angular, Vue.js Back end: PHP, node.js, Apache Database: MySQL, PostgreSQL, MongoDB
	Content Processing: Text: Microsoft Office, L ^A T _E X, XML Multimedia: Audition, Photoshop, Apple Final Cut Pro
DATE COMPLIED	Friday, January 21, 2022