Shulin Zhang, Ph.D. Candidate

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SKILLS

- **Programming**: **Python** (Jupyter, Pandas, SpaCy, ScikitLearn, NLTK, Numpy, Scipy, Pytorch etc.), **R**, SQL, Git, AzureML, Cloud computing, Huggingface
- NLP: Computational linguistics, Natural Language Processing for text, audio using Deep Learning models, Knowledge Graph, Text mining, Word embedding, Text feature extraction, Corpus Linguistics, Generative AI, Conversational AI, Large Language Models(LLMs), Discourse Analysis, Graph Neural Networks(GNN)
- **Brain imaging**: fMRI, EEG data collection and analyses
- Research: 10+ years' quantitative and qualitative experiment design and publications, data visualization, presentation skills at international conferences
- Solid Statistics, Machine Learning, Deep Learning, AI knowledge with teaching and mentoring experience

WORKING EXPERIENCE

Graduate Researcher Aug 2014 - Now

Southwest University & University of Georgia

- Carried out qualitative and quantitative experiments, and took lead role in more than 5 projects that got published in highimpact journal or conference publications
- Questionnaire and study design, data collection, and data analysis with R and Python
- Individual and group interview skills
- Brain imaging (including EEG, fMRI) and behavioral data analyses

Data Science Intern - NLP Jun 2023 - Aug 2023

GEICO, Washington, DC

- Worked in Generative AI application project and presented during final shark tank stage to the stakeholders
- Applied LLMs to Conversational AI agent using AzureML, used models including LangChain
- Completed data preprocessing for a large customer dataset
- Designed knowledge graph application using Huggingface LLMs(large language models), and presented to the RAD group

Data Science Intern - ML/AI May 2019 - Aug 2019

TISTA, Washington, DC

- Applied machine learning method Autoencoder in medical hospital record data analysis
- Medical big data processing, feature selection using PCA
- Supported team for project application to National Institution of Health(NIH)

Data Science Intern - NLP May 2018 - Aug 2018

Grandview Thinktank, Beijing, China

- Researched and designed the 1st version prototype of an AI big data analysis and knowledge graph platform, and presented to the stakeholders
- Carried out text sentimental analysis using Python
- Realized discourse analyses using Multinomial Logistic Regression in R
- Built pipeline for knowledge graph visualization

Product Manager Assistant - Web UX

Jan 2017 - Jul 2017

Beijing, China

- Assisted with website design and prototype design
- Analyzed competitive products
- Monitored daily web user traffic, and generated statistical reports
- Assisted with SEO(Search Engine Optimization), and web landing page testing
- Launched application on Apple Store (with more than 520k ratings now)

EDUCATION

PhD in Linguistics, University of Georgia, United States

MS in Artificial Intelligence, University of Georgia, United States

MS in Psychology, Southwest University, China

BE in Electronic Engineering, Dalian University of Technology, China

2014

PUBLICATIONS SELECTED

Shulin Zhang, Jixing Li, and John Hale. 2022. Quantifying Discourse Support for Omitted Pronouns. In *Proceedings of the Fifth Workshop on Computational Models of Reference, Anaphora and Coreference*, pages 1–12, Gyeongju, Republic of Korea. Association for Computational Linguistics.

Zhang, Shulin, Jixing Li, Yiming Yang, and John Hale. "Decoding the silence: Neural bases of zero pronoun resolution in Chinese." *Brain and Language* 224 (2022): 105050.