Mengyang Qiu

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EDUCATION

UNIVERSITY AT BUFFALO

Ph.D. in Communicative Disorders and Sciences
Expected June 2021

M.S. in Computational Linguistics
June 2019

M.A. in General Linguistics
February 2016

B.A. in Linguistics and Psychology
June 2013

SKILLS

• Java • Python • Javascript
• R • Matlab • SPSS
• psiTurk • jsPsych • JATOS
• PyTorch • Keras • SpaCy
• LaTeX • AWS • Prolog • Praat

COURSEWORK

COMPUTATIONAL LINGUISTICS

• Introduction to Computational Linguistics
• Introduction to Cognitive Science
• Corpus Linguistics
• Machine Learning
• Deep Learning
• Modeling and Matlab
• Knowledge Engineering for NLP
• Syntactic Parsing Using (Un)supervised Learning
• Applied NLP and Computational Social Sciences

COMMUNICATIVE DISORDERS

• Evaluating Clinical Change
• Language Disorders in Adults
• Language Disorders in Children
• Language Acquisition
• Neural Basis of Communication
• Motor Speech Disorders
• Disorders of Memory
• Augmentative Communication

RESEARCH EXPERIENCE

UNIVERSITY AT BUFFALO

Graduate Research Assistant
August 2016 – Present | Computational Language and Memory Lab

- Developing automated assessment procedures using computational models of language and memory to detect Mild Cognitive Impairment, Alzheimer's disease and other forms of dementia
- Working on experiments to delineate the natural changes that occur as a consequence of increasing amounts of experience during aging from actual cognitive decline

Project Leader
January 2019 – May 2019 | Supervisor: Jungyeul Park, Ph.D.

- Working on BEA 2019 Shared Task: Grammatical Error Correction
- Supervising four master's students in this project
- Experimenting statistical machine translation and neural machine translation approaches to grammatical error correction
- Using real errors and surrounding context to generate artificial grammatical error sentences for data augmentation
- Examining various evaluation metrics for data augmentation

Graduate Research Assistant
June 2017 – August 2017 | Computational Cognitive Neuroscience Lab

- Learned to use SPM12 in Matlab to analyze fMRI data
- Worked on an fMRI experiment using lexical decision task with a word frequency manipulation

Undergraduate Research Assistant
June 2012 – May 2013 | Psycholinguistics Lab

- Ran participants in various experiments (e.g., relationship between the verb and its participants, choice of sentence structure in sentence processing, processing of lexical ambiguity, and repetition and semantic priming)
- Generated experimental items (synonyms, antonyms, and categorical coordinates); examined various characteristics of words and word pairs (e.g., word frequencies, and forward and backward associations)
- Analyzed data from previous undergraduate research project on repetition priming effects

SELECTED PUBLICATIONS

- Qiu, M. & Johns, B. T. (in press). Semantic diversity in paired-associate learning: Further evidence for the information accumulation perspective of cognitive aging. Psychonomic Bulletin & Review.
- Qiu, M. & Park, J. (2019). Artificial error generation with fluency filtering. Proceedings of the 14th Workshop on Innovative Use of NLP for Building Educational Applications.
- Qiu, M., Chen, X., Liu, M., Parvathala, K., Patil, A. & Park, J. (2019). Improving precision of grammatical error correction with a cheat sheet. Proceedings of the 14th Workshop on Innovative Use of NLP for Building Educational Applications.
- Qiu, M. & Johns, B. T. (2018). Memory searching pathway underlying verb fluency. Poster presented at the 2018 ASHA Convention.