

Willa Mannering

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EXPERIENCE/PROJECTS

Modeling Collaborative Memory

August 2020 - Present

- The goal of this project is to adapt individual models of memory to the collaborative setting to investigate collaborative memory effects such as group size, expertise, and shared memories.
- Used Python and Cognitive Modeling skills.
- Project repository: github.com/willa-mannering/Cognitive-Models
- Publications: [Towards a Cognitive Model of Collaborative Memory, Modeling the Effect of Learning During Retrieval on Collaborative Inhibition](#)

Catastrophic Interference in Neural Networks

August 2018 - May 2020

- The goal of this project was to determine the extent to which catastrophic interference is present in predictive semantic models (such as Word2Vec) and offer possible solutions (such as Elastic Weight Consolidation or alternate architectures).
- Used Python, TensorFlow, Deep Learning, Natural Language Processing, and Semantic Modeling skills.
- Project Repositories: github.com/willa-mannering/CI-in-NeuralNetworks, github.com/willa-mannering/Distributional-Semantic-Models
- Publication: [Catastrophic Interference in Predictive Neural Network Models of Distributional Semantics](#)

Risk Averse Decision Making in Forensic Scientists

May 2018 - February 2021

- The goal of this project was to determine and compare the decision criteria for fingerprint examiners and novices during fingerprint examinations.
- Used Python, Behavioral Research, Statistical Analysis, and Decision Modeling skills.
- [Project UI](#)
- Publication: [Are Forensic Scientists Too Risk Averse?](#)

SKILLS

- Python
- TensorFlow
- R
- SQL
- Machine Learning
- Deep Learning
- Natural Language Processing
- Cognitive Modeling
- Semantic Modeling
- Behavioral Research
- Decision Modeling
- Statistical Analysis

PRESENTATIONS

Towards a Cognitive Model of Collaborative Memory

November 2021- Presented at the Ninth Annual Conference on Advances in Cognitive Systems

Towards a Cognitive Model of Collaborative Memory

July 2021- Presented at the 43rd Annual Meeting of the Cognitive Science Society

Insulating Distributional Semantic Models from Catastrophic Interference

November 2019- Presented as poster at the 60th Annual Meeting of the Psychonomic Society

Insulating Distributional Semantic Models from Catastrophic Interference

July 2019- Presented as poster at the 41st Annual Meeting of the Cognitive Science Society

AWARDS

Sharon Stephens Brehm Excellence in Research Award

Spring 2019

Honorable Mention for NSF Graduate Research Fellowship Program

Spring 2019

EDUCATION

Indiana University, Bloomington — *Cognitive Science PhD*

May 2018-Present

Indiana University, Bloomington — *Psychology PhD*

May 2018-Present

Indiana University, Bloomington — *Cognitive Science BS*

August 2014 - May 2018

Awarded with Highest Honors & Distinction

Indiana University, Bloomington — *Computer Science BA*

August 2014 - May 2018

Awarded with Highest Honors & Distinction