

# MELISSA ROEMMELE

San Francisco, CA

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## OVERVIEW

I'm a researcher and software practitioner with a PhD in computer science. My expertise is in natural language processing (NLP). From my experience with various NLP tasks, I've developed a particular passion for using automated language generation to transform human-computer interaction. I have a scientific curiosity for how people interpret and respond to generated language, as well as a motivation to use generation systems to augment human communication. In my recent work, I've developed and assessed software that assists people with creative writing tasks. I'm seeking opportunities to continue to innovate language-based AI systems.

## EDUCATION

### PhD, Computer Science (2018)

University of Southern California, Los Angeles, CA

Thesis: *Neural Networks for Narrative Continuation* ([abstract](#)) ([full text](#))

Advisor: [Andrew Gordon](#)

### MA, Computational Linguistics (2010)

Indiana University, Bloomington, IN

### BA, Linguistics and Psychology, *Summa Cum Laude* (2009)

Miami University, Oxford, Ohio

## EXPERIENCE

### Senior Research Scientist, Language Weaver (RWS Group) 6/2018 - present

Developed and published research on various NLP capabilities for enabling rapid content understanding and creation, including automated summarization, simplification, question generation, and elaboration.

### Research Assistant, Institute for Creative Technologies 8/2012 - 5/2018 University of Southern California, Los Angeles, CA

In the Data-driven Interactive Narrative Engine project, explored machine learning techniques for predicting “what happens next” in stories. In particular, developed an application called Creative Help that provides automated assistance for story writing. Additionally, in the Heider Simmel Interactive Theater project, used machine learning techniques to model story-based interpretations of abstract visual animations.

### Data Science Intern, Civis Analytics, Chicago, IL 6/2016 - 8/2016

Examined techniques for visualizing and interpreting neural networks for text prediction tasks.

### FileMaker Developer, DB Services, Indianapolis, IN 11/2011 - 7/2012

Developed relational database applications using the software FileMaker.

### Computational Linguist, Rivera Group, Sellersburg, IN 9/2010 - 4/2011

Developed a system for automatically detecting topics in internet weblogs.

**SELECTED  
PUBLICATIONS**  
(see [Google Scholar](#) for all)

**Roemmele**, Shaffer, Olsen, Wang, DeNeeffe (2023). AbLit: A Resource for Analyzing and Generating Abridged Versions of English Literature. EACL 2023.

**Roemmele** (2021). Inspiration through Observation: Demonstrating the Influence of Automatically Generated Text on Creative Writing. ICCC 2021.

**Roemmele**, Sidhpura, DeNeeffe, Tsou (2021). AnswerQuest: A System for Generating Question-Answer Items from Multi-Paragraph Documents. EACL 2021, Demo Track.

**Roemmele** (2019). Identifying Sensible Lexical Relations in Generated Stories. Workshop on Narrative Understanding at NAACL 2019.

**Roemmele** and Gordon (2018). Linguistic Features of Helpfulness in Automated Support for Creative Writing. Storytelling Workshop at NAACL 2018.

**Roemmele**, Gordon, and Swanson (2017). Evaluating Story Generation Systems Using Automated Linguistic Analyses. Workshop on Machine Learning for Creativity at SIGKDD 2017.

**Roemmele**, Mordo, and Gordon (2017). Natural-language Interactive Narratives in Imaginal Exposure Therapy for Obsessive-Compulsive Disorder. Computational Linguistics and Clinical Psychology Workshop at ACL 2017.

**Roemmele**, Kobayashi, Inoue and Gordon (2017). An RNN-based Binary Classifier for the Story Cloze Test. Linking Models of Lexical, Sentential and Discourse-level Semantics Workshop at EACL 2017.

**Roemmele**, Morgens, Gordon, and Morency (2016). Recognizing Human Actions in the Motion Trajectories of Shapes. IUI 2016.

**Roemmele** and Gordon (2015). Creative Help: A Story Writing Assistant. ICIDS 2015.

**Roemmele**, Archer-McClellan, and Gordon (2014). Triangle Charades: A Data-Collection Game for Recognizing Actions in Motion Trajectories. IUI 2014.

**Roemmele**, Bejan, and Gordon (2011). Choice of Plausible Alternatives: An Evaluation of Commonsense Causal Reasoning. 10th Symposium on Logical Formalizations of Commonsense Reasoning.

**TECHNICAL  
SKILLS**

Expertise in Python and Python tools for statistical modeling/machine learning (PyTorch, Keras, Scikit-learn, TensorFlow, HuggingFace Transformers), NLP (spaCy, gensim, NLTK), and data computing (numpy, scipy, pandas). Experience with web development frameworks (Vue.js, React, Javascript/HTML/CSS).

**OTHER  
HIGHLIGHTS**

Featured in July 2021 ACM article Engineering Additional Creativity.

ACM Chicago talk about AI-augmented creative writing: AI and Creative Writing: How Computers Can Help People Write Fiction.

Invited talks at the In2Writing workshop at ACL 2022, Computational Creativity for NLG workshop at INLG 2019 and the Storytelling Workshop at ACL 2019.

Instructor for the course “Siri, What is Natural Language Processing?” in spring 2019 at the Institute for Educational Advancement in Pasadena, CA. This 10-week course introduced linguistics and natural language processing to students ages 12-14.

Ongoing PC member for ACL, AACL, and ICCV.