

MELISSA ROEMMELE

📍 San Francisco, CA

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OVERVIEW

I'm a scientist and engineer specializing in the evaluation and optimization of generative AI systems for creative applications. I was most recently part of the Midjourney Storytelling Lab, where I helped build AI-based tools that facilitate unique ways to tell stories. My work focuses on developing frameworks that analyze AI models' capabilities in supporting creative expression. This includes prototyping novel interfaces utilizing large language models (LLMs) and text-to-image models, as well as designing human-in-the-loop and automated evaluation methodologies to assess the output quality of these models. I hold a PhD in Computer Science from the University of Southern California, where my dissertation explored emerging applications of language modeling to creative writing assistance. See [my website](#) for more information about my recent projects and [my Google Scholar page](#) for my full list of publications.

EXPERIENCE

Research Scientist

Jun 2024 – Dec 2025

[Midjourney](#), San Francisco, CA

As part of the [Midjourney Storytelling Lab](#), I developed tools for AI-supported storytelling. This includes [Patchwork](#), a worldbuilding tool, and [Dramamancer](#), an interactive visual novel app. I also established new model pipelines and evaluation resources for the task of [automatically illustrating scenes in stories](#).

Research Scientist

Jun 2018 – Jun 2024

[Language Weaver \(RWS Group\)](#), Los Angeles, CA

I developed AI approaches for dynamically adapting texts in order to enable rapid content understanding. This included building NLP models to [summarize](#) and [simplify](#) documents, and also to [synthesize Q&A pairs](#). In 2024, I led a team developing data and models for [machine translation quality estimation](#).

Graduate Research Assistant

Aug 2012 – May 2018

[USC Institute for Creative Technologies](#), Los Angeles, CA

I explored machine learning techniques for narrative continuation, the task of predicting "what happens next" in stories. In particular, I developed an application called [Creative Help](#) that helps people write stories by automatically generating suggested sentences. This was one of the first demonstrations of the use of language models for creative writing assistance.

Data Science Intern

Jun 2016 – Aug 2016

[Civis Analytics](#), Chicago, IL

I examined techniques for [interpreting neural networks](#) for text prediction tasks.

FileMaker Developer

Nov 2011 – Jul 2012

[DB Services](#), Indianapolis, IN

I developed relational database applications using FileMaker.

EDUCATION

PhD, Computer Science

2018

University of Southern California (USC)

Los Angeles, CA

[Thesis: Neural Networks for Narrative Continuation](#)

[Advisor: Andrew Gordon](#)

MA, Computational Linguistics

2010

Indiana University

Bloomington, IN

BA, Linguistics & Psychology

2009

Miami University

Oxford, OH

TECHNICAL SKILLS

Experience highlights (not exhaustive):

Programming: My preferred language is [Python](#). I also have experience with [JavaScript](#) for web development.

AI/Machine Learning: I favor the use of high-level frameworks for model development, especially the [HuggingFace Transformers](#) library and [Scikit-learn](#) for simple classical models.

Math/Computing: I've implemented machine learning functionality in [PyTorch](#). I use [NumPy](#) and [SciPy](#) for mathematical analyses.

Data: I use [Pandas](#) for data processing, and [Seaborn](#) and [Plotly](#) for data visualization. I often use these tools inside [Jupyter notebooks](#).

NLP: For linguistic analysis tasks, I've worked extensively with [spaCy](#) and [NLTK](#) libraries.

Coding Practices: I value having strong technical fundamentals but I embrace AI assistance in my typical coding workflow. I use [Cursor](#) as my IDE.