

# Daniel Quigley

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Linguistics and Artificial Intelligence PhD Candidate | Genius Technician  
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EDUCATION	<b>PhD, Linguistics and Artificial Intelligence</b>	2025
	University of Wisconsin-Milwaukee, Milwaukee, WI — PhD Minor, Computer Science	
	<b>MA, Linguistics</b>	2023
	University of Wisconsin-Milwaukee, Milwaukee, WI	
	<b>MSc Certificate, Theoretical Physics</b>	2019
	Universiteit Utrecht, Utrecht, The Netherlands — Honors, Graduate Student Interdisciplinary Seminar	
	<b>BSc, Anthropology, Astronomy, Linguistics, Mathematics, Physics</b>	2018
	University of Wisconsin-Madison, Madison, WI — Certificate in Archaeology	
EXPERIENCE	<b>Apple Internship: Production Engineer</b>	
	Apple, Cupertino, CA	2023–present
	<ul style="list-style-type: none"><li>• Testing and deploying demo content to channel stores across iOS, tvOS, watchOS, and macOS platforms from development to production.</li><li>• Developing, maintaining, and documenting sophisticated automation frameworks, using Python scripting to enhance operational efficiency.</li><li>• Validating content in twenty-one languages across twenty-five locales sensitive to local content and language requirements while crafting comprehensive test plans and technical documentation for new features and internal tools.</li></ul>	
	<b>Genius Technician</b>	
	Apple, Glendale, WI	2021–present
	<ul style="list-style-type: none"><li>• Demonstrated leadership while also mentoring Technical Specialists and Technical Experts; developed and implemented new processes to improve efficiency and effectiveness of Genius Bar team.</li><li>• Exceeded expectations for customer satisfaction: attained performance review scores of 88 TMS and 74 NPS, excelling in metrics for technical expertise (89) and empathy (80).</li><li>• Certified for iPhone and Mac repair, maintaining 95% repair rate on devices.</li></ul>	
	<b>PhD Researcher</b>	
	University of Wisconsin-Milwaukee, Milwaukee, WI	2020–present
	<ul style="list-style-type: none"><li>• Conducting research in artificial intelligence and natural language processing on problems in natural language understanding and semantic representations of word- and phrase-level expressions.</li><li>• Proved category theoretic morphisms between formal semantics and vector space semantics; derived tensor forms of high-level linguistic phrases.</li><li>• Researching linguistic and mathematical foundations and methods for representation and optimization in context of category theory for natural language understanding.</li></ul>	

### ***Instructor of Record***

University of Wisconsin-Milwaukee, Milwaukee, WI

2020–present

- Responsible for class sizes of 20-30 students per semester, providing comprehensive support and guidance.
- Designed course content to include topics in natural language processing, such as introductory concepts and artificial intelligence ethics.
- Providing effective feedback and communication to improve performance, demonstrating commitment to student success and learning.

### ***LaTeX Developer***

University of Wisconsin-Milwaukee, Milwaukee, WI

2020–present

- Designed LaTeX document templates, accepted by university as official resources for graduate school.
- Created document tagging and readability methods to improve designs of accessible PDF documents.
- Developing intelligent UIs for improved accessibility of PDF documents, improving usability for users with accessibility needs and machine readability.

### ***Research Assistant***

Wisconsin IceCube Particle Astrophysics Center, Madison, WI

2014–2018

- Designed and implemented simulations, data acquisition systems, and visualizations for HAWC (High-Altitude Water Cherenkov) gamma-ray detector.
- Resolved discrepancies in gamma-ray results across four international experiments; wrote GPS data system using ZeroMQ in C++.
- Communicated results of simulations and technical developments with international teams, demonstrating strong collaboration and communication skills.

**PUBLICATIONS** Quigley, Daniel (2023). Exploring Category-Theoretic Morphisms for Model-Theoretic Semantics. Manuscript submitted for review.

Quigley, Daniel (2023). Decoding Authorial Style, Tone, and Mood in Poetic Translations through Natural Language Processing: An Analysis of *Beowulf*. In Proceedings: Working Papers in Linguistics.

**PRESENTATIONS** “Tensor Space and Category-Theoretic Semantics for Resolving Long-Distance Linguistic Expressions in Natural Language Processing”

- PhD preliminary paper and presentation UW-Milwaukee, May 2023

“Decoding Authorial Style, Tone, and Mood in Poetic Translations through Natural Language Processing: An Analysis of *Beowulf*”

- Workshop in General Linguistics UW-Madison, April 2023

“LaTeX for Linguists”

- Summer Workshop UW-Milwaukee, August 2022

### **SKILLS**

#### ***Programming Languages and Development Tools***

Python (NumPy, Keras, Scikit-Learn, Gensim, Stanza, NLTK, PyTorch, Pandas, IDLE), LaTeX, VIM

#### ***Machine Learning, Language Processing, Data Analysis, and Development Tools***

TensorFlow, Excel, Mathematica, Keras, Scikit-Learn, PyTorch, PRAAT, Stanza, NLTK

#### ***Operating Systems and Software***

Linux, Windows, MacOS, Conda, CUDA (GPU Programming), MS Office Suite