

Dan DeGenaro

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EXPERIENCE

GEORGETOWN UNIVERSITY | GRADUATE TEACHING ASSISTANT

Sep 2023 – Present | Washington, DC

- Served as a teaching fellow for three graduate courses and one undergraduate course.
- Developed, debugged, tested, and graded assignments in the form of Python notebooks.
- Lectured on PyTorch and Google Colab fundamentals.

JOHNS HOPKINS UNIVERSITY | VISITING RESEARCH SCHOLAR

June 2024 – Aug 2024 | Baltimore, MD

- Participated in the Human Language Technology Center of Excellence SCALE 2024 workshop.
- Contributed to a multimodal information retrieval system designed to retrieve relevant videos given text queries.
- Developed a novel technique using downstream retrieval systems to produce preference rankings. Fine-tuned LLM using reinforcement learning to produce more retrievable document summaries.

MIT | PROJECT COURSE INSTRUCTOR

May 2024 – Aug 2024 | Remote

- Designed and implemented, from scratch, a machine learning and NLP course for sophisticated high school students.
- Taught advanced machine learning concepts including deep learning architectures such as transformers to 18 students for 7 weeks.
- Guided students to produce 5 group projects using cutting-edge machine learning techniques.

UNIVERSITY OF COLORADO, COLORADO SPRINGS | UNDERGRADUATE RESEARCHER

May 2022 – Aug 2022 | Colorado Springs, CO

- Developed a novel technique for the distillation of a multilingual BERT model into a smaller model.
- Developed original dataset, trained and fine-tuned a series of neural networks using PyTorch.
- Wrote and presented a research paper documenting methodology and results.

PUBLICATIONS

- [1] D. DeGenaro and T. Lupicki. Experiments in mamba sequence modeling and NLLB-200 fine-tuning for low resource multilingual machine translation. In M. Mager, A. Ebrahimi, S. Rijhwani, A. Oncevay, L. Chiruzzo, R. Pugh, and K. von der Wense, editors, *Proceedings of the 4th Workshop on Natural Language Processing for Indigenous Languages of the Americas (AmericasNLP 2024)*, pages 188–194, Mexico City, Mexico, June 2024. Association for Computational Linguistics.
- [2] S. Samuel, D. DeGenaro, J. Guallar-Blasco, K. Sanders, O. Eisape, A. Reddy, A. Martin, A. Yates, E. Yang, C. Carpenter, D. Etter, E. Kayi, M. Wiesner, K. Murray, and R. Kriz. Mmmorrf: Multimodal multilingual modularized reciprocal rank fusion, 2025.

EDUCATION

GEORGETOWN UNIVERSITY

PHD IN COMPUTER SCIENCE

Starting Aug 2025 | Washington, DC

GEORGETOWN UNIVERSITY

MS IN COMPUTATIONAL LINGUISTICS

Aug 2023 - May 2025 | Washington, DC

UMASS AMHERST

BA IN LINGUISTICS

BS IN PHYSICS

BS IN APPLIED MATHEMATICS

Minor in Computer Science

Minor in Russian

Sep 2019 - May 2023 | Amherst, MA

SKILLS

PROGRAMMING

Python • R • Java • SQL • MATLAB
HTML/CSS • C • JavaScript

TECHNOLOGY

PyTorch • TensorFlow • Data Science
Git/Github • AWS • Linux
Docker • Windows • Slurm

COURSEWORK

GRADUATE

Deep Learning (*also TA*)

Multilingual NLP

Machine Learning

Hypothesis Testing

Data Analytics (*TA*)

Computer Vision (*TA*)

UNDERGRADUATE

NLP I-III

Sociolinguistics

Mathematical Stats

Algorithm Design + Analysis

Calculus I-III

Linear Algebra I-II

Differential Equations

Quantum Mechanics I-II

LINKS

Github: [ddeggenaro](#)

LinkedIn: [daniel-degenaro](#)

Google Scholar: [bU6sD_0AAAAJ](#)

Semantic Scholar: [2308476598](#)

ORCID: [0009-0005-1850-1801](#)

ResearchGate: [Dan-DeGenaro](#)