ALEXANDER SCARLATOS

Computer Science PhD student at University of Massachusetts Amherst

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EDUCATION

University of Massachusetts Amherst   Sep 2021 - (May 2026)

· PhD in Computer Science, GPA: 4.00/4.00
· Advised by Prof. Andrew Lan

Stony Brook University   Aug 2013 - May 2018

· MS in Computer Science, GPA: 3.90/4.00
· BS in Computer Science with minor in Music Technology, GPA: 3.81/4.00

WORK EXPERIENCE

Google DeepMind   Dec 2023 - March 2024
Student Researcher

· Worked with the Magenta team to develop an interface for musical human-AI collaboration.

Bloomberg L.P.   July 2018 - Aug 2021
Software Engineer

· Full-stack developer for high volume client-facing applications, designed application architecture and development workflows, built CI/CD tools used across teams, mentored incoming teammates.

Applied Visions Inc.   Jan 2016 - Jan 2017
Software Engineer Intern

· Worked on software for visualizing large network security datasets and for building branching story comics.

Eduware Inc.   Feb 2014 - Nov 2015
Part-Time Web Developer

· Worked on online testing platforms, automated workflows, and Unity games.

TEACHING EXPERIENCE

University of Massachusetts Amherst

· Teaching assistant for Computer Science 240 - Reasoning Under Uncertainty, Fall 2021 and Spring 2024.
· Guest lecture on natural language processing in Computer Science 389 – Introduction to Machine Learning, Spring 2023.

Code Nation

· Volunteer teacher, teaching programming basics to high schoolers in an underserved community, Sep 2019 - June 2020.

SERVICE

- **Guest Editor** for the Journal of Educational Technology Systems, Special Issue on AI, March 2024.

- **Reviewer** for ACL Rolling Review (Dec 2022, Dec 2023, April 2024), Building Educational Applications (May 2023), Journal of Educational Data Mining (Sept 2023), Journal of Educational Technology Systems (Aug 2022, March 2024).

- **Volunteer** at a UMass Eureka! Program workshop teaching programming principles to middle school girls, July 2022.
- **Mentor** for PhD applicant from underserved community in UMass PhD Applicant Support Program, Dec 2021.

HONORS AND AWARDS

- Member of winning team for NCES Math Automated Scoring Challenge 2023.
- One of the URECA researchers of the month at Stony Brook University, May 2017.
- Graduated Magnum Cum Laude from Stony Brook University, 2017.
- Honors College and Computer Science Honors Program at Stony Brook University, 2013-2017.
- Presidential Scholarship and Dean's Scholarship from Stony Brook University, 2013.
- Link and A.B. Lawrence Scholarships for community service from First Presbyterian Church of Smithtown, 2013.

RESEARCH PUBLICATIONS

Selected Papers:

Improving the Validity of Automatically Generated Feedback via Reinforcement Learning
AIED 2024

· *Alexander Scarlatos*, Digory Smith, Simon Woodhead, Andrew Lan

SyllabusQA: A Course Logistics Question Answering Dataset
ACL 2024

· Nigel Fernandez, *Alexander Scarlatos*, Andrew Lan

Exploring Automated Distractor Generation for Math Multiple-choice Questions via Large Language Models
NAACL 2024 (Findings)

· Wanyong Feng*, Jaewook Lee*, Hunter McNichols*, *Alexander Scarlatos*, Digory Smith, Simon Woodhead, Nancy Otero Ornelas, Andrew Lan

Tree-Based Representation and Generation of Natural and Mathematical Language
ACL 2023

· *Alexander Scarlatos*, Andrew Lan

Process-BERT: A Framework for Representation Learning on Educational Process Data
EDM 2022

· *Alexander Scarlatos*, Christopher Brinton, Andrew Lan

Other Papers:

Adaptive Accompaniment with ReaLchords
ICML 2024

· Yusong Wu, Tim Cooijmans, Kyle Kastner, Adam Roberts, Ian Simon, *Alexander Scarlatos*, Chris Donahue, Cassie Tarakajian, Shayegan Omidshafiei, Aaron Courville, Pablo Samuel Castro, Natasha Jaques, Cheng-Zhi Anna Huang

Improving Automated Distractor Generation for Math Multiple-choice Questions with Overgenerate-and-rank
BEA (NAACL Workshop) 2024

· *Alexander Scarlatos**, Wanyong Feng*, Digory Smith, Simon Woodhead, Andrew Lan

Automated Distractor and Feedback Generation for Math Multiple-choice Questions via In-context Learning
GAIED (NeurIPS Workshop) 2023

· Hunter McNichols*, Wanyong Feng*, Jaewook Lee*, *Alexander Scarlatos*, Digory Smith, Simon Woodhead, Andrew Lan

UMass PCL at SemEval-2022 Task 4: Pre-trained Language Model Ensembles for Detecting Patronizing and Condescending Language
SemEval (NAACL Workshop) 2022

· David Koleczek, *Alexander Scarlatos*, Preshma Linet Pereira, Siddha Makarand Karkare

Sonispace: a simulated-space interface for sound design and experimentation
Master's Project Report

· *Alexander Scarlatos*

Working Papers:

RetICL: Sequential Retrieval of In-Context Examples with Reinforcement Learning

· *Alexander Scarlatos*, Andrew Lan

* equal contribution

EXTRA-CURRICULAR

- **Music** I have a small anthology of electronic music compositions and have produced a rock album. I enjoy playing classical and improvisational piano (NYSSMA level 6 in high school) and have accompanied many students on piano for performances and auditions.

- **Hobbies** In my free time I enjoy rock climbing, hiking, photography, and playing Chess.