Yunting (Heather) Yin, PhD

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Github : https://github.com/Yinsight https://yinsight.github.io

RESEARCH INTERESTS

AI for Health, Data Science, Speech Processing, Natural Language Processing

EMPLOYMENT

Eastern Michigan University, Ypsilanti, MI — August 2025 - Present
Tenure-Track Assistant Professor of Computer Science

Earlham College, Richmond, IN — July 2024 - August 2025
Tenure-Track Assistant Professor of Computer Science

EDUCATION

Stony Brook University, Stony Brook, NY — Aug 2019 - May 2024
Ph.D. in Computer Science — GPA: 3.79/4.0
Advisor: Steven Skiena
Recipient of Chairman's Fellowship and Inclusive Computing Fellowship

Pace University, New York, NY — Sept 2016 - May 2019
B.S. in Computer Science — Rank: 1, GPA: 3.98/4.0
Graduated with Scholastic Achievement Award and Summa Cum Laude Honors
Recipient of Honors College Scholarship and Honors Opportunity Scholarship

TEACHING EXPERIENCE

Faculty at Eastern Michigan University — Fall 2025
- COSC 221 Computer Organization I
- COSC 444/541 Automata

Faculty at Earlham College — Fall 2024, Spring 2025
- CS 128 Programming & Problem Solving (Lecture & Lab)
- CS 355 Computer Game Design
- Sample Class "Sorting Algorithms for Faster Computation" for Alumni Homecoming
- CS 256 Data Structures (Lecture & Lab)
- CS 266 Computing Skills
- CS 345 Software Engineering
- [C,D]S 388 Methods For Research & Dissemination in Computer Science and Data Science
- [C,D]S 488 Senior Capstone

Python Lecturer for Data Science — Fall 2023
- Taught two lectures for graduate-level data science class to over 200 students.

Teaching Assistant for Computer Networks — Summer 2021
- Guided students on concepts related to networking configurations, troubleshooting, and simulations.

Project Leader for Women in Computer Science — Spring 2021
- Instructed a group of female STEM students on data science projects and assisted in carrying out experiments.

Teaching Assistant for Data Science — Summer 2020, Fall 2020
- Designed diverse data science projects covering a range of data types and analytical approaches including statistical analyses and advanced machine learning techniques.
- Assisted in the design and proctoring of exams.

Teaching Assistant for Foundations of Computer Science — Summer 2020
- Led recitation session to break down complex theoretical problems.
- Held regular office hours and offered individualized support to resolve students' queries.

Teaching Assistant for Principles of Programming Languages Fall 2019, Spring 2020
- Supported instruction and addressed specific inquiries related to various programming languages and their unique characteristics.

PUBLICATIONS

(⋆ indicates research outcome with directly supervised undergraduate students)

Yunting Yin, Douglas William Hanes, Steven Skiena, and Sean A P Clouston. "Quantifying Healthy Aging in Older Veterans using Computational Audio Analysis", in the Journals of Gerontology: Series A, 2023.

Zuhui Wang, **Yunting Yin**, and I.V. Ramakrishnan. "Enhancing Image-Text Matching with Adaptive Feature Aggregation", ICASSP 2024.

⋆ Ngoc Tuong Vy Nguyen, Felix D Childress, and **Yunting Yin**. "Debate-Driven Multi-Agent LLMs for Phishing Email Detection", ISDFS 2025.

⋆ Charuta Pethe, Bach Pham, Felix D Childress, **Yunting Yin**, and Steven Skiena. "Prosody Analysis of Audiobooks", IEEE ICSC 2025.

⋆ Bach Pham, JuiHsuan Wong, Samuel Kim, **Yunting Yin**, and Steven Skiena. "Word Definitions from Large Language Models", IEEE ICSC 2025.

⋆ Ngoc Tuong Vy Nguyen, and **Yunting Yin**. "Reasoning in Signals: A Survey of Large Language Models for Sensor Data Understanding", ICEEE 2025.

Yunting Yin, and Steven Skiena. "Inferring Age from Linguistic and Verbal Cues in Celebrity Interviews", FAIML 2023.

Nanjie Deng, Junchao Xia, Lauren Wickstrom, Clement Lin, Kaibo Wang, Peng He, **Yunting Yin**, and Danzhou Yang. "Ligand Selectivity in the Recognition of Protoberberine Alkaloids by Hybrid-2 Human Telomeric G-Quadruplex: Binding Free Energy Calculation, Fluorescence Binding, and NMR Experiments", in Molecules 2019, 24(8), 1574.

GRANTS

(1) PALSave Course Redesign Grant, January 2025, $1,400.

(2) Indiana Academy of Science Senior Research Grant, "Voice, Language, and Longevity: Identifying Digital Biomarkers for Dementia Using Speech and Language Analysis on Veteran Interviews with Cause-of-Death Data," April 2025-May 2026, $4,900.

(3) James H. Brickley Endowment for Faculty Professional Development and Innovation, "Vision-Language Models for Soccer Match Analysis and Accessible Commentary," November 2025-December 2026, $5,450.

TALKS

[1] *The Sound of Aging*, SBU Three Minute Thesis Competition, April 2023, Stony Brook University, NY, USA.

[2] *Inferring Age from Linguistic and Verbal Cues in Celeberity Interviews*, FAIML Conference, April 2023, Online.

[3] *He Sounded Good Today: Quantifying Healthy Aging in World War II Veterans Using Computational Audio Analysis*, AI in Aging and Age-related Diseases Conference, November 2022, Online.

WORK EXPERIENCE

Teaching and Research Assistant, Stony Brook University Aug 2019 - May 2024
- Worked on various machine learning research projects including vocal aging analysis and forecasting with large language models.

Math Tutor, Pace University Learning Center Sep 2018 - May 2019
- Provided one-on-one and group tutoring sessions for students in algebra, calculus, and statistics to improve comprehension.
- Worked closely with professors to align tutoring sessions with classroom instruction.

Web Developer Intern, Overseas Students Services Corp Oct 2017 - May 2018
- Designed and coded responsive websites to showcase the company's range of services.

TECHNICAL PROJECTS

Feasibility of Reducing Prescription Drug Cost Through Generic Alternatives
Capstone project for Correlation One Data Science for All (DS4A) / Women program, which explores market dynamics of generic vs brand-name prescription drugs.

How much do people sleep?
Analyzed large-scale Twitter data to get insight into factors affecting how much sleep different populations receive, and how sleeping schedule affects mental health.

Seatizen App
Developed during MTA hackathon to predict occupancy patterns using historical data and calculate real time passenger count using camera feeds and object identification.

TECHNICAL SKILLS

Languages: Python, Java, C/C++, C#, SQL, R, PHP, JavaScript, Kotlin
Tools & Software: Jupyter, PyCharm, Eclipse, Git, Kaldi, Visual Studio, LaTeX
Libraries: NumPy, Scikit-learn, NLTK, PyTorch, TensorFlow, Hadoop, React, D3.js

PROFESSIONAL SERVICES

Program Committee for Conference: AAAI
Reviewer for Conferences: NeurIPS, EMNLP, AAAI, AISTATS, PAKDD, AVSS, ICASSP
Reviewer for Journals: Alzheimer's Research & Therapy, Data Science and Management, Engineering Reports, Neural Computing and Applications, Pattern Recognition
Reviewer for Workshops: UDM-KDD, ICDM-AI4TS, NeurIPS-AI4D3, NeurIPS-TGL, AAAI-ReLM, AAAI-AI4TS, NeurIPS - AI4D3, IJCB-AI4BIO, ICML-FMWild, ICML-AI4MATH
Student Representative, Graduate Curriculum Committee of Stony Brook University Computer Science Department, October 2022 to May 2024.
TA Onboarding and Inclusivity Trainer, Stony Brook University Computer Science Department, June 2022 to October 2022.