

William Theisen

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Education

University of Notre Dame

PH.D. IN COMPUTER SCIENCE

- **Advisor:** Dr. Walter Scheirer

Notre Dame, IN

April 2024

University of Notre Dame

M.S. IN COMPUTER SCIENCE

- **Advisor:** Dr. Walter Scheirer

Notre Dame, IN

June 2022

University of Notre Dame

B.S. IN COMPUTER SCIENCE

Notre Dame, IN

May 2018

Teaching Experience

University of Notre Dame

ASSISTANT TEACHING PROFESSOR

Notre Dame, IN

Fall 2024 - Present

- Instructor of Record - Introduction to Artificial Intelligence: Course Website - 89 Students - Fall 2025
 - Received a student feedback score of *** / 5**.
- Instructor of Record - Programming Challenges: Course Website - 40 Students - Fall 2025
 - Received a student feedback score of *** / 5**.
 - Updated SWE focused lectures to include discussions of modern AI development tools.
- Instructor of Record - Introduction to Artificial Intelligence: Course Website - 60 Students - Spring 2025
 - Received a student feedback score of **4.6 / 5**.
 - Created semester long murder-mystery assignment theme with mixed physical and digital components
- Instructor of Record - Programming Challenges: Course Website - 24 Students - Spring 2025
 - Received a student feedback score of **5 / 5**.
 - Created a leaderboard for students to compete for a pool of bonus points in line with the course theme, available at: Leaderboard
- Instructor of Record - Introduction to Artificial Intelligence: Course Website - 90 Students - Fall 2024
 - Received a student feedback score of **4.3 / 5**.
 - Redid all curricula and course materials from scratch
- Instructor of Record - Programming Challenges: Course Website - 43 Students - Fall 2024
 - Received a student feedback score of **5 / 5**.

University of Notre Dame

GRADUATE INSTRUCTOR

Notre Dame, IN

Spring 2023 - Fall 2023

- Instructor of Record - Programming Challenges: Course Website - 63 Students - Fall 2023
 - Received a student feedback score of **5 / 5**.
- Co-lead - DEI Summer Seminar Program - Summer 2023
 - Co-lecturer for a summer seminar series on problem solving.
 - Helped develop curriculum for promoting equity amongst underserved students in the department.
- Instructor of Record - Programming Paradigms: Course Website - 53 Students - Spring 2023
 - Redesigned curriculum and course materials from scratch.
 - Received a student feedback score of **4.6 / 5** as a first time instructor

University of Notre Dame

TEACHING ASSISTANT

South Bend, IN

Spring 2017 - Spring 2019

- Spring Semester 2019: Graduate TA for Computer Security
- Fall Semester 2018: Graduate TA for Operating System Principles
- Spring Semester 2018: Undergraduate TA for Systems Programming
- Fall Semester 2017: Undergraduate TA for Operating System Principles
- Spring Semester 2017: Undergraduate TA for Systems Programming

Academic - Other

University of Notre Dame DIRECTOR OF UNDERGRADUATE STUDIES - BBCS Served as the director of undergraduate studies for the BBCS, serving as the CSE academic advisor for * students.	Notre Dame, IN Fall 2025 - Present
University of Notre Dame DIRECTOR OF UNDERGRADUATE STUDIES - BACS Served as the director of undergraduate studies for the BACS, serving as the CSE academic advisor for * students.	Notre Dame, IN Fall 2025 - Present
University of Notre Dame UNDERGRADUATE THESIS ADVISOR Began advising an undergraduate senior in the BACS program on his senior thesis.	Notre Dame, IN Fall 2025 - Present
University of Notre Dame COURSE DEVELOPMENT Began working with a large number of stakeholders across the university to offer an introductory artificial intelligence course for freshman engineers starting in Spring 2026.	Notre Dame, IN Fall 2025
University of Notre Dame CO-DIRECTOR OF UNDERGRADUATE STUDIES Served as the co-director of undergraduate studies for two degree programs in the department of computer science and engineering, the Bachelors of Arts in Computer Science and the Bachelors of Business and Computer Science.	Notre Dame, IN Spring 2025
University of Indiana - Pennsylvania COURSE MATERIALS USED AT OTHER UNIVERSITY Course materials from CSE 30872 - Programming Challenges used to help competitive programming team practice	Indiana, PA Fall 2024 - Present
University of Notre Dame APPROVED IRB In conjunction with professor in Mendoza - ITAO submitted an IRB to perform a study about the possibility of using ChatGPT systems as a provisional auto-grader in several programming heavy classes.	Notre Dame, IN Fall 2024
University of Notre Dame PROFESSIONAL DEVELOPMENT - Solicited and received a lecture review from the Kaneb Teaching Center to further improve and refine lecture style and materials. - Learned about the "Backwards" Design Process and began implementing principles into course design	Notre Dame, IN Fall 2024
University of Notre Dame ELECTIVE CLEANUP COMMITTEE - Served as a member of the elective cleanup committee, tasked with identifying and improving elective offerings in the computer science department. - Resulted in several recommendations to the Chair and Department, all of which were approved, including: splitting cross-listed courses and implementation of tagging system for registration clarity.	Notre Dame, IN Fall 2024
University of Notre Dame PROFESSIONAL DEVELOPMENT Attended the Kaneb Center's pre-semester teaching workshop for new faculty.	Notre Dame, IN Fall 2024

Service

University of Notre Dame BUILDING BRIDGES MENTOR Served as a mentor for a first-year student interested in Computer Science from a historically underrepresented background	Notre Dame, IN Fall 2024 - Present
University of Notre Dame CLUB SPORTS VOLUNTEER COACH - Served as a volunteer coach for the University of Notre Dame's Ultimate Frisbee Club consisting of over 100 students, several of which are majoring in computer science. - Time spent was approximately 6+ hours a week on an average week and more when tournament and game travel was required.	Notre Dame, IN Fall 2024 - Present
South Bend, IN BOARD OF DIRECTORS - SOUTH BEND ULTIMATE - Served as a member for the board of directors for South Bend Ultimate's non-profit organization. - The organization runs youth outreach and amateur sport leagues in the South Bend area.	Notre Dame, IN Spring 2024 - Present

Publications

Patrick Gerard, **William Theisen**, Tim Weninger, Kristina Lerman. “*Fear and Loathing on the Frontline: Decoding the Language of Othering by Russia-Ukraine War Bloggers*” in Proceedings of the AAAI International Conference on Web and Social Media (ICWSM), 2025.

William Theisen, Michael Yankoski, Kristina Hook, Tim Weninger, Walter Scheirer, and Ernesto Verdeja. “*Visual narratives and political instability: a case study of visual media prior to the Russia-Ukraine conflict*” in the Journal of Information, Communication, and Society, 2025

William Theisen. “*Motif Mining: Towards Multimodal Retrieval for Discovering Disinformation Trends in Social Media*” Dissertation, 2024

William Theisen and Walter Scheirer. “*N-Modal Contrastive Losses With Application to Social Media Data in Trimodal Space*”, <https://arxiv.org/pdf/2403.12747>, 2024

William Theisen and Walter Scheirer. “*C-CLIP: Contrastive Image-Text Encoders to Close the Descriptive-Commentative Gap*” Accepted WACV '24, <https://arxiv.org/pdf/2309.03921.pdf>, 2023

William Theisen, Michael Yankoski, Kristina Hook, Tim Weninger, Walter Scheirer, and Ernesto Verdeja. “*An Avalanche of Images on Telegram Preceded Russia’s Full-Scale Invasion of Ukraine*”, 2024

William Theisen, Daniel Gonzalez Cedre, Zachariah Carmichael, Daniel Moreira, Tim Weninger, Walter Scheirer. “*Motif Mining: Finding and Summarizing Remixed Image Content*” in Winter Conference on Applications of Computer Vision (WACV), 2023

Daniel Moreira, **William Theisen**, Walter Scheirer, Aparna Bharati, Joel Brogan, Anderson Rocha. “*Image Provenance Analysis*” in Multimedia Forensics from Springer Nature (389-432), 2022

Michael Yankoski, **William Theisen**, Ernesto Verdeja, and Walter Scheirer. “*Artificial Intelligence for Peace: An Early Warning System for Mass Violence*” in Towards an International Political Economy of Artificial Intelligence (147-175), 2021.

Trenton W Ford, Michael Yankoski, **William Theisen**, Tom Henry, Farah Khashman, Katherine R Dearstyne, Tim Weninger. “*MEWS: Real-time Social Media Manipulation Detection and Analysis*” in Proceedings of Machine Learning Research: NeurIPS 2021 Competition and Demonstration Track (NeurIPS), 2021

William Theisen, Joel Brogan, Pamela Bilo Thomas, Daniel Moreira, Pascal Phoa, Timothy Weninger, and Walter Scheirer. “*Automatic Discovery of Meme Genres with Diverse Appearances*” in Proceedings of the AAAI International Conference on Web and Social Media (ICWSM), 2020.

Invited Talks

Invited Presentation

WACV 2024

[Kona, Hawaii](#)

January 2024

- Presented our publication ‘C-CLIP: Contrastive Image-Text Encoders to Close the Descriptive-Commentative Gap’ at the conference to which it was accepted.

Invited Presentation

WACV 2023

[Kona, Hawaii](#)

January 2023

- Presented our publication ‘Motif Mining: Finding and Summarizing Remixed Image Content’ at the conference to which it was accepted.

Invited Presentation

THE TURING INSTITUTE

[Virtual Presentation](#)

February 2022

- Presented our work on the Misinformation Early Warning System (MEWS) project.

Invited Presentation

LEHIGH UNIVERSITY

[Bethlehem, Pennsylvania](#)

April 2021

- Guest lecturer for an Image Forensics class at Lehigh University.

Invited Presentation

ICWSM 2021

[Virtual Conference](#)

May 2021

- Presented our publication ‘Automatic Discovery of Political Meme Genres with Diverse Appearances’ at the conference to which it was accepted.

Invited Presentation

UNIVERSITY OF NOTRE DAME

[Notre Dame, IN](#)

November 2019

- Guest lecturer for a Tech Ethics class at Notre Dame presenting on Modern Propaganda.

Recognitions

Outstanding Faculty Teaching Award

Notre Dame, IN

UNIVERSITY OF NOTRE DAME (DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING)

May, 2025

- Received the Outstanding Faculty Teaching Award, voted on by graduated seniors, in the Department of Computer Science and Engineering

Outstanding Graduate Student Instructor

Notre Dame, IN

UNIVERSITY OF NOTRE DAME (DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING)

April, 2024

- Received the CSE award for outstanding graduate student instructor in the Department of Computer Science and Engineering

Outstanding Graduate Student Instructor

Notre Dame, IN

UNIVERSITY OF NOTRE DAME (KANEH CENTER)

April, 2024

- Received the Kaneh Center award for outstanding graduate student instructor in the Department of Computer Science and Engineering

Reviews

WACV

2023, 2024, 2025

ICWSM

2022, 2023, 2024

TKDE

2023

T-IFS

2023

ASONAM

2023

Professional Experience

University of Notre Dame

Notre Dame, IN

GRADUATE RESEARCH ASSISTANT

June 2018 - May 2024

- Improved image retrieval for the task of aiding watch-dog organizations combat misinformation abroad.
- Developed the MEWS pipeline to provide a front-end of our research to non-technical partners.
- Worked with our partners at Red Hat Research to develop and improve tools for detecting manipulated images.

Red Hat Software

Boston, MA (Remote)

RESEARCH INTERN

June 2022 - August 2022

- Created a demo for a microservices-based pipeline for online misinformation detection

Nyhart Consulting

Indianapolis, IN

SOFTWARE ENGINEERING INTERN

May 2017 - August 2017

- Developed a front-end tool to aid actuaries interfacing with a database.