

# William Theisen

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## Education

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### University of Notre Dame

PH.D. IN COMPUTER SCIENCE

- **Advisor:** Dr. Walter Scheirer

*Notre Dame, IN*

*Expected Dec 2023*

### University of Notre Dame

B.S. IN COMPUTER SCIENCE

*Notre Dame, IN*

*May 2018*

## Professional Experience

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### University of Notre Dame

GRADUATE RESEARCH ASSISTANT

- Improving image retrieval for the task of aiding watch-dog organizations combat misinformation abroad.
- Developing the MEWS pipeline to provide a front-end of our research to non-technical partners.
- Aid patent lawyers in creating a toolkit to help uncover illegitimate trademark claims.
- Work with our partners at Red Hat Research to develop and improve tools for detecting manipulated images.

*Notre Dame, IN*

*June 2018 - Present*

### University of Notre Dame

GRADUATE TEACHING ASSISTANT

- Spring Semester: Computer Security
- Fall Semester: Operating System Principles

*South Bend, IN*

*August 2018 - May 2019*

### University of Notre Dame

UNDERGRADUATE TEACHING ASSISTANT

- Spring Semester: Systems Programming
- Fall Semester: Operating System Principles

*South Bend, IN*

*August 2017 - May 2018*

### Nyhart Consulting

SOFTWARE ENGINEERING INTERN

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

*Indianapolis, IN*

*May 2017 - August 2017*

### University of Notre Dame

UNDERGRADUATE TEACHING ASSISTANT

- Spring Semester: Systems Programming

*South Bend, IN*

*January 2017 - May 2017*

## Research Presentations

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### Invited Presentation

LEHIGH UNIVERSITY

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

*Bethlehem, Pennsylvania*

*April 2021*

### Invited Presentation

ICWSM 2021

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

*Virtual Conference*

*May 2021*

### Invited Presentation

UNIVERSITY OF NOTRE DAME

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

*Notre Dame, IN*

*November 2019*

## Skills

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**Computer Skills** Python, Shell Scripting, SQL, HTML  
**Knowledge** Image Retrieval, Image Similarity, Online Misinformation  
**Languages** English

## Recent Publications

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

**William Theisen**, Daniel Gonzalez Cedre, Zachariah Carmichael, Daniel Moreira, Tim Weninger, Walter Scheirer. “*Motif Mining: Finding and Summarizing Remixed Image Content*” in Arxiv Preprint, 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.

**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.