NOAH ZIEMS

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EDUCATION

University of Notre Dame   *2022-present*
Ph.D Student in Computer Science
NLP, Instruction Tuning, Information Retrieval

Advised by Dr. Meng Jiang

Ball State University   *2017-2021*
Bachelor of Science in Computer Science
Honors College

Overall GPA: Cum Laude (3.7/4.0)

EXPERIENCE

LeadSigma   August 2020 - May 2021
Software Engineering Intern   *Remote*

· Created a backend using Ruby on Rails for a B2B Sales Software startup. I was also responsible for creating & testing the frontend(React) before there was a frontend team and writing AWS Lambda integrations in Python to be used with Salesforce. In this role I helped grow the revenue from $0 to more than 6 figures.

PUBLICATIONS

LLM Explanations of Decision Trees for Network Intrusion Detection   September 2023
***Noah Ziems**, Gang Liu, John Flanagan, Meng Jiang*   *NeurIPS XAI Workshop 2023*

· We show LLMs are capable of generating natural language explanations of decision trees. Specifically, we apply this to network intrusion detection where decision trees are effective (99% accuracy) but lack of explainability significantly hinders their usefullness in practice. We show human evaluators both strongly prefer and have better understanding when using LLM generated explanations compared to alternative rule-based approaches.

Large Language Models are Built-in Autoregressive Search Engines   January 2023
***Noah Ziems**, Wenhao Yu, Zhihan Zhang, Meng Jiang*   *ACL Findings 2023*

· We show LLMs are capable of directly generating URLs to help answer questions in the open domain setting. I was responsible with taking the original research direction, designing experiments, generating the analysis and case studies, and writing the paper itself.

Embedding Mental Health Discourse for Community Recommendation   May 2023
*Hy Dang, Bang Nguyen, **Noah Ziems**, Meng Jiang*   *ACL CODI Workshop 2023*

Parathyroid Tumor Detection with Machine Learning   May 2021
***Noah Ziems**, Shaoen Wu, Jim Norman*   *IEEE GLOBECOM 2021*

Security Vulnerability Detection Using Natural Language Processing   Jan 2021
***Noah Ziems**, Shaoen Wu*   *IEEE INFOCOM 2021*

SERVICE

Conference Reviewer

· AAAI 2022
· ACL 2023
· TKDE 2023
· NeurIPS 2023

Teaching Assistant

· **Notre Dame Outstanding Graduate Teaching Assistant Award (2022-2023)**
· CSE 44567: Computer Security (Spring 2023)
· CSE 40243: Compilers and Language Design (Fall 2022)