

JAY ROTHENBERGER

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EDUCATION

The University of Oklahoma, Norman, Oklahoma – *Ph.D. in Computer Science*

August 2021 – expected May 2026 – GPA: 4.00

The University of Virginia, Charlottesville, Virginia – *B.S. in Computer Science and Mathematics*

August 2017 – May 2021

WORK EXPERIENCE

Honeywell

Minneapolis, Minnesota – ***Ph.D. AI Intern***

May 2025 – **current**

- Trained 3D generative models for engine part design optimization
- Implemented and evaluated models to reduce latency for relocalization during GPS-denied navigation
- Participated in an intern hackathon prototyping solutions for autonomous navigation

LumenUs Scientific

Norman, Oklahoma – ***Machine Learning Engineer Intern***

May 2024 – August 2024

- Developed, implemented, and executed efficient data pipelines for data integration, compression, and AI-ready processing for over 32 Terabytes of data
- Evaluated data storage and compression and storage formats for large datasets used during model training
- Developed and trained a foundation model for the The Earth Surface Mineral Dust Source Investigation Imaging Spectrometer (EMIT)

Vaisala

Boulder, Colorado – ***Machine Learning Intern***

May 2023 – August 2023

- Developed and trained a new (now operational) Deep Learning model for hail prediction that achieves state of the art nowcasting performance improving upon prior work by 32% CSI
- Design Implemented and applied standard explainable artificial intelligence (XAI) techniques including SHAP, PFI, and Integrated Gradients for higher dimensional observations in a HPC setting

NSF AI Institute for Research on Trustworthy AI in Weather, Climate, and Coastal Oceanography

Norman, Oklahoma – ***Graduate Research Assistant***

August 2021 – **current**

- Designed and developed a vision transformer model for image classification capable of producing its own class activation maps as an explanation for each prediction several hundred times faster than comparable post hoc methods
- Implemented parallel training strategies for the University of Oklahoma OSCER supercomputer to accelerate model training and enable model scaling for members of the institute decreasing model training time by 87.5%
- Mentored 4 undergraduate students in research experience leading to conference presentations at the annual meeting of the American Meteorological Society (AMS)

PUBLICATIONS

Jay C. Rothenberger and Dimitrios I. Diochnos. ***Meta Co-Training: Two Views***

are Better than One, 2023. URL <https://doi.org/10.48550/arXiv.2311.18083>. in ECAI 2025

SERVICE

19th International Symposium on AI and Mathematics - Organizing Committee Member

Publications and Publicity Chair