

Nicholas Kashani Motlagh

Email: kashanimotlagh.1@osu.edu — Phone: +1 (614)-886-1412 — **US CITIZEN**

LinkedIn: linkedin.com/in/nicholas-kashani-motlagh — Website: nmotlagh.github.io

EDUCATION

Ohio State University

Ph.D. in Computer Science and Engineering

M.S. in Computer Science and Engineering

Advisor: Prof. Jim Davis; Minors: Mathematics and High-Performance Computing

Columbus, OH

Aug 2021 - May 2026 (Expected)

Aug 2021 - May 2025

GPA: 3.70

Ohio State University

B.S. in Computer Science and Engineering with Honors

Minor: Mathematics; Scholarships: Maximus, Ten-Hai Lai, Ansel, Name and Seal

Columbus, OH

Aug 2017 - May 2021

GPA: 3.86

EXPERIENCE

Ohio State University (sponsored by Air Force Research Laboratory)

Columbus, OH

Graduate Research Associate, Computer Vision Lab

August 2021 - Present

Assessing the Role of Imagery in Multimodal Machine Translation (WMT 2024)

- Designed contrastive metrics that assess visual comprehension in multimodal machine translation (MMT) models
- Demonstrated that MMT models scored favorably, challenging prevailing views of imagery as a regularizer

Naturally Constrained Reject Option Classification (MVA 2025)

- Invited to submit an extension of our award-winning reject option work
- Analyzed our reject option approach on remote sensing and long-tailed datasets, demonstrating its generalizability

Learning to Say “I Don’t Know” (ISVC 2022, **Best Paper Award**)

- Innovated a novel per-class reject option objective using Binomial models, adaptable to any classifier-dataset pairing
- Improved select accuracy of vision transformers by +0.4% and coverage by +1.3% over thresholding on ImageNet

Graduate Teaching Associate, Machine Learning & NLP

August 2023 - Present

- Conducted office hours and graded 80+ students in machine learning and natural language processing courses

DCS Corp (sponsored by Air Force Research Laboratory)

Dayton, OH

Technical Analyst II

May 2025 - Present

- Trained LLMs with reject option capabilities, improving out-of-distribution utility by **8× over** competing approaches

Air Force Research Laboratory

Dayton, OH

Graduate Research Intern (Mentors: Dr. Matthew Scherreik and Dr. Tim Anderson, U.S. CUI)

Summer 2022/23/24

- Summer 24: Adapted and trained JEPA and MAE transformers in a distributed setup for multimodal EO/SAR representation learning, achieving superior low-data performance over supervised methods
- Summer 23: Developed ‘Reject Option Beam Search’ to improve machine translation quality at large beam widths
- Summer 22: Pioneered an end-to-end training algorithm for Naturally Constrained Reject Option Classification

Undergraduate Research Intern (Mentor: Dr. Roman Ilin, U.S. CUI)

Summer 2020/21

- Summer 21: Devised an ensemble distillation method to improve model performance on ambiguous instances
- Summer 20: Constructed a semi-automated system for temporal satellite imagery collection (ICCV-W 2021)

PUBLICATIONS

N. Kashani Motlagh, J. Davis, T. Anderson, J. Gwinnup

“*Naturally Constrained Reject Option Classification*”

Machine Vision and Applications 36, 9 (2025).

N. Kashani Motlagh, J. Davis, T. Anderson, J. Gwinnup, G. Erdmann

“*Assessing the Role of Imagery in Multimodal Machine Translation*”

Conference on Machine Translation, November 2024

N. Kashani Motlagh, J. Davis, T. Anderson, J. Gwinnup

“*Learning When to Say ‘I Don’t Know’*”

International Symposium on Visual Computing, October 2022 - **Springer Best Paper Award**

N. Kashani Motlagh, A. Radhakrishnan, J. Davis, R. Ilin

“*A Framework for Semi-automatic Collection of Temporal Satellite Imagery for Analysis of Dynamic Regions*”

IEEE/CVF International Conference on Computer Vision Workshop, October 2021

TECHNICAL SKILLS

Languages & Tools: Python, PyTorch, Vision Language Models, HuggingFace, Git, Slurm, Singularity, L^AT_EX

PROFESSIONAL SERVICE

Reviewer: ICCV ‘23, CVPR ‘23, ECCV ‘22, CVPR ‘22; **Volunteer:** HackOHI/O ‘23