Nicholas Kashani Motlagh

Email: kashanimotlagh.1@osu.edu — *Phone:* +1 (614)-886-1412 — *LinkedIn:* linkedin.com/in/nicholas-kashani-motlagh — *Website:* nmotlagh.github.io — **US Citizen**

EDUCATION

Ohio State University	Columbus, OH
Ph.D. in Computer Science and Engineering	Aug 2021 - May 2026 (Expected)
Advisor: Prof. Jim Davis; Minors: Mathematics and High-Performance Computing	GPA: 3.65
Ohio State University	Columbus, OH
B.S. in Computer Science and Engineering with Honors	Aug 2017 - May 2021
Minor: Mathematics; Scholarships: Maximus, Ten-Hai Lai, Ansel, Name and Seal.	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 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 — August 2023 - May 2024
- Conducted office hours and graded 80+ students in a theoretical machine learning course (CSE 5523)

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)

Concordia University (sponsored by SII Canada) — Montreal, Canada

Undergraduate Research Intern (Mentor: Dr. Khashayar Khorasani) — Summer 2019
- Created a UAV obstacle avoidance pipeline encompassing data collection, CNN training, and evaluation (NDA)

PUBLICATIONS

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

JOURNALS

N. Kashani Motlagh, J. Davis, T. Anderson, J. Gwinnup
"Naturally Constrained Reject Option Classification"
Machine Vision and Applications 36, 9 (2025).

TECHNICAL SKILLS

Languages & Tools: Python, PyTorch, Vision Language Models, HuggingFace, Git, Slurm, Singularity, LaTeX

PROFESSIONAL SERVICE

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