Agnibh Dasgupta

✉ adg002@gmail.com   ☎ +14357549599   📍 Omaha, NE   in Linkedin ↗   ⌕ Github ↗

Education

Current	PhD, Computing & Information Science, **University of Nebraska, Omaha**
2018 - 2020	Master of Science, Computer Science, **Utah State University**
2013 - 2017	Bachelor of Technology, Computer Science, **West Bengal University of Technology**

Publications

2025 — **Watermarking Language Models through Language Models (IEEE TAI)** *(in press)*
- Built a prompt-based LLM watermarking framework without modifying model weights or data
- Evaluated watermark generation and detection using instruction-tuned LLMs

2025 — **Utilization of SAM2 Model for the Segmentation of Retinal Vascular Leakage on Ultra-wide-field Fluorescein Angiography in Non-infectious Retinal Vasculitis (AAO)** *(in press)*
- Trained a classifier on patches of large optic scans to accurately detect areas of leakage

2024 — Enhanced Image Watermarking Through Cross-Attention and Noise-Invariant Domain Learning (Imaging Science: Computer Vision, Image and Signal Processing Pattern Recognition) ↗
- Improved robustness and scalability of image watermarking under heavy compound noise

2024 — Leveraging Artificial Intelligence (AI) to Enhance CS Instruction (FIE) ↗
- Utilized multi-modality in deep learning models for mood detection in K-12 classroom videos

2023 — Robust Image Watermarking based on Cross-Attention and Invariant Domain Learning (CSCI) ↗
- Designed a robust image watermarking scheme using cross-attention (ViT)
- Trained a self-supervised invariant domain to learn semantic features

2022 — Perspective transformation layer (CSCI) ↗
- Proposed a lightweight layer that learns 2D projections of 3D views for multiple viewpoints

Present and Past Research

Present	**Invariant Latent Features in Large Language Models** • Studying model-specific invariant features for robust model attribution
Present	**GAN-Based Auto Augmenter for Realistic Image Augmentations** • Learning modular auto-augmentations for robust invariant latent representation
2022	**Sentiment Analysis on Twitter data on Electric Vehicles** • Analyzed sentiment with lexical and Word2Vec-LSTM approaches on scraped twitter data
2020	**Stock trading optimization using Reinforcement Learning** • Used a DQN agent to optimize stock trading on the S&P500 index using Google Trends data

Reviewer Service

2022 - 2025	ACCV, Scientific Reports - Nature, Springer Nature

Teaching Experience

2023 - 2024	**Graduate teaching assistant** at University of Nebraska at Omaha
2022 - 2023	**Intern supervisor** at University of Nebraska at Omaha
2018 - 2020	**Graduate teaching assistant** at Utah State University

Technical skills

Programming:	Python, Linux, BASH, MATLAB, Git
Deep learning:	Transformers, GAN, LLM, NLP, Tensorflow, Keras, PyTorch
Others:	OpenCV, CUDA, SQL, HTML, JAVA, C/C++