# Darryl Hannan

hannandarryl@gmail.com • hannandarryl.github.io
https://www.linkedin.com/in/darryl-hannan-a33563205/ • https://github.com/hannandarryl

## Bio

Machine learning researcher with expertise in computer vision, natural language processing, and biologically inspired AI systems. Strong record in foundational research and applied ML.

## Education

**Drexel University** **Philadelphia, PA**
*Ph.D. in Computer Science* *2022–2024*
Dissertation: Leveraging Multiple Modalities and Expert Knowledge for Limited Data Scenarios
NSF GRFP Fellow. Advised by Prof. Edward Kim in the SPARSE Coding Lab.

**University of North Carolina at Chapel Hill** **Chapel Hill, NC**
*M.S. in Computer Science* *2018–2021*
Researcher in MURGe-Lab under Prof. Mohit Bansal.

**Villanova University** **Villanova, PA**
*B.S. in Computer Science* *2014–2018*
Graduated with Honors. Concentration in Cognitive Science. GPA: 3.77

## Research Experience

**Pacific Northwest National Laboratory** **Seattle, WA (Remote)**
*Postdoctoral Researcher* *2024–Present*
Research in the areas of computer vision, remote sensing, and neuromorphic computing.

*PhD Research Intern* *2023–2024*
Conducted research in computer vision, remote sensing, and neuromorphic computing as part of the National Security Internship Program.

**Drexel University** **Philadelphia, PA (Remote)**
*NSF Graduate Research Fellow* *2022–Present*
Conducted research focused on biologically-inspired learning techniques, event-based video processing, and neuromorphic computing.

*AI Engineer* *2021–2022*
Implemented and applied biologically-inspired learning techniques to a pneumothorax classification task.

**UNC Chapel Hill** **Chapel Hill, NC**
*Graduate Researcher / NSF Fellow* *2018–2021*
Conducted research across NLP subfields with an emphasis on multimodal processing integrating vision and language.

**Tencent America** **Bellevue, WA (Remote)**
*NLP Research Intern* *Summer 2020*
Conducted research on improving transformer-based conversational QA models via dialogue generation techniques.

**Los Alamos National Laboratory** **Los Alamos, NM**
*Applied ML Fellow* *Summer 2018*
Applied biologically-inspired sparse-coding models to language, leveraging top-down feedback to influence sentence-level representations.

*Student Research Scientist* *Summer 2017*
Developed a multimodal deep sparse coding model using biologically-inspired learning techniques.

## Publications

**[13]**: D. Hannan et al., *"FMG-Det: Foundation Model Guided Robust Object Detection,"* ICIP, 2025.

**[12]**: D. Hannan et al., *"Foundation Models for Remote Sensing: An Analysis of MLLMs for Object Localization,"* CVPR MORSE Workshop, 2025.

**[11]**: E. Yeats, S. Mahan, D. Hannan et al., *"Automating Evaluation of Diffusion Model Unlearning with (Vision-) Language Model World Knowledge,"* CVPR ReGenAI Workshop, 2025.

**[10]**: D. Hannan et al., *"An Analysis of Multimodal Large Language Models for Object Localization in Earth Observation Imagery,"* ICLR ML4RS Workshop, 2025.

**[9]**: D. Hannan et al., *"The Impact of an XAI-Augmented Approach on Binary Classification with Scarce Data,"* IJCAI XAI Workshop, 2024.

**[8]**: D. Hannan et al., *"Interpretable Models for Detecting and Monitoring Elevated Intracranial Pressure,"* ISBI, 2024.

**[7]**: D. Hannan et al., *"Event-to-Video Conversion for Overhead Object Detection,"* SSIAI, 2024.

**[6]**: D. Hannan et al., *"MobilePTX: Sparse Coding for Pneumothorax Detection Given Limited Training Examples,"* IAAI, 2023.

**[5]**: A. Maharana, D. Hannan, M. Bansal, *"StoryDALL-E: Adapting Pretrained Text-to-Image Transformers for Story Continuation,"* ECCV, 2022.

**[4]**: D. Hannan et al., *"RESIN-11: Schema-guided Event Prediction for 11 Newsworthy Scenarios,"* NAACL Demo, 2022.

**[3]**: A. Maharana, D. Hannan, M. Bansal, *"Improving Generation and Evaluation of Visual Stories via Semantic Consistency,"* NAACL, 2021.

**[2]**: D. Hannan, A. Jain, M. Bansal, *"ManyModalQA: Modality Disambiguation and QA over Diverse Inputs,"* AAAI, 2020.

**[1]**: E. Kim, D. Hannan, G. Kenyon, *"Deep Sparse Coding for Invariant Halle Berry Neurons,"* CVPR, 2018.

## Technical Skills

**Programming**: Python, PyTorch, TensorFlow, Matplotlib, NumPy, spaCy

**ML Ecosystem**: Hugging Face, Scikit-Learn, MMDetection

**Development Tools**: Git, Docker, Linux, LaTeX

## Academic Service & Awards

**Reviewer**: WACV (2024–2025), EACL-SW (2024), SSIAI (2024), Workshop on Document Intelligence (2019)

**Honors**: NSF GRFP Fellow (top 15%), Applied ML Fellow at LANL (top 10%), Villanova Research Grant Awardee

## References

Available upon request.