Levi Harris

levlevi@cs.unc.edu — +1 828-772-1120 — linkedin.com/in/levi-harris-cs — leharris3.github.io

RESEARCH INTERESTS

AI-applications for scientific domains (Metrology, Meteorology), **Computer Vision**

EDUCATION

University of North Carolina at Chapel Hill *Expected Fall 2025*
M.Sc. Computer Science – *Advisor: Prof. Tianlong Chen*

University of North Carolina at Chapel Hill *Awarded Spring 2024*
B.Sc. Computer Science Minor in Data Science

SELECTED PUBLICATIONS

1. **Levi Harris**, Tianlong Chen, "A Space-Time Transformer for Precipitation Forecasting", **1st Place NeurIPS 2025 Weather4Cast Challenge**, *arXiv preprint arXiv:2511.11090*, 2025.
2. **Levi Harris**, Matthew Woods, Stanley Czyzyk, Yagmur Derin, Pierre Kirestetter, "Physics-informed deep learning QPE for the western CONUS", *In Preparation for the Journal of Hydrology*
3. **Levi Harris**, Md Jayed Hossain, Mufan Qiu, Ruichen Zhang, Pingchuan Ma, Tianlong Chen, Jiaqi Gu, Seth Ariel Tongay, Umberto Celano, "SparseC-AFM: a deep learning method for fast and accurate characterization of MoS_2 with C-AFM," *SPIE Conference on Low-Dimensional Materials and Devices; paper 13582-35, 2025.*
4. **Levi Harris**, "A Simple and Effective Temporal Grounding Pipeline for Basketball Broadcast Footage", *arXiv preprint arXiv:2411.00862*, 2024.

TALKS/PANEL DISCUSSIONS

"SaTformer" [Oral] *6 December 2025*
NeurIPS 2025 Weather4Cast Challenge San Diego, CA
"SparseC-AFM" [Author] *17 September 2025*
SPIE Conference on Low-Dimensional Materials and Devices 2025 San Diego, CA
"Decoding Graduate Research at UNC" [Panelist] *14 October 2025*
UNC CSSG Chapel Hill, NC
"AI is Easy! My journey as an undergraduate researcher" *29 November 2023*
UNC AI Club Symposium Chapel Hill, NC

EXPERIENCE

UNITES Lab Chapel Hill, NC
PI: Prof. Tianlong Chen *Fall 2024 - Present*
Bertasius Lab Chapel Hill, NC
PI: Prof. Gedas Bertasius *Spring 2023 - Fall 2024*
The National Weather Service Las Vegas, NV
Intern — Mentor: Stanley Czyzyk *Summer 2025*
Bank of America Plano, TX
SWE Intern — Mentor: Joey Bondoc *Summer 2023*

AWARDS

Department Tuition Award (∼10K) 2024, 2025
Dean's List 2021, 2022, 2023, 2024

TEACHING

DATA 120: Ethics of Artificial Intelligence
Teaching Assistant — Instructor: Prof. Santiago Olivella Fall 2025
Teaching Assistant — Instructor: Prof. Justin Sola Spring 2025
Teaching Assistant — Instructor: Prof. Neil Gaikwad Fall 2024

SELECTED COURSES

Multivariate Calculus · Introduction to Probability · Linear Algebra · Introduction to Machine Learning · Computational Imaging · Video Recognition with Transformers · Computer Vision of our 3D World · Efficient Machine Learning · Transfer Learning · Ordinary Differential Equations* · Introductory Calculus-based Mechanics and Relativity* · Mathematical Methods for the Physical Sciences I*

Planned Spring 2026

SKILLS

Programming Languages	Python (advanced), Java, C, JavaScript, TypeScript, Swift, Bash, SQL
Frameworks	PyTorch, TensorFlow, Angular, SpringBoot, UIKit
Databases	Oracle, Firebase
Tools	Git, Docker, VertexAI
SPM	Gwyddion, MATLAB, ImageJ

MENTORING

Asyat Sow (UNC Chancelor's Scholar)   Summer 2025
Undergraduate, Advisor: *"An Evaluation of the Failure Modes of Real-Time Speech-to-Speech Translation Systems on French Regional Dialects"*
Wonjae Oh   Fall 2024
Undergraduate, Advisor: *"A Day-One Jailbreak for GPT-4V using Ascii Ciphers"*

REFERENCES

Prof. Tianlong Chen
Assistant Professor, Department of Computer Science, University of North Carolina at Chapel Hill
E-mail: tianlong@cs.unc.edu
Website

Prof. Gedas Bertasius
Assistant Professor, Department of Computer Science, University of North Carolina at Chapel Hill
E-mail: gedas@cs.unc.edu
Website

Prof. Neil Gaikwad
Assistant Professor, School of Data Science and Society, University of North Carolina at Chapel Hill
E-mail: gaikwad@unc.edu
Website

Prof. Pierre Kirestetter
Professor, School of Meteorology, Oklahoma University
E-mail: pierre-emmanuel.kirstetter@ou.edu
Website