

KYLE J GILLETT

Master's Student, Severe Storm Scientist, Meteorologist

Department of Atmospheric Sciences, University of North Dakota, Grand Forks, ND

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1 EDUCATION

M.S., Atmospheric Science, University of North Dakota In progress

B.S., Meteorology, Minor Mathematics, Central Michigan University May 2024

2 RESEARCH EXPERIENCE

Master's Thesis Research, University of North Dakota In progress

- **Title:** *"An examination of the effects of storm interactions on tornadogenesis in numerical experiments"*
- **Advisor:** Dr. Catherine Finley

Graduate Research Assistant, University of North Dakota June-August 2025

- **Project:** *"Using Aircraft Observations to Improve Tropical Cyclone Tornado Predictability Before Landfall"*
- **Advisor:** Dr. Jacob Carstens

Undergraduate Research Assistant, Central Michigan University April-August 2023

- **Project:** *"Synoptic & Mesoscale Variability of US Large Hail Environments"*
- **Advisor:** Dr. John Allen

3 PERSONAL PROJECT EXPERIENCE

SounderPy, Sole Developer July 2023-present

- SounderPy is PyPi python package that retrieves and plots vertical profile data for meteorological analysis.

- SounderPy can retrieve data from the ECMWF ERA5, RAP, RUC, & NCEP-FNL reanalysis datasets, IGRAv2, RAOB, & ACARS observations, and BUFKIT model forecasts.
- This package quickly and effectively retrieves, parses, and plots sounding data in easy-to-use formats.
- SounderPy is being used by a number of NWS WFOs, Universities, and other institutions and has been used in peer-reviewed literature.
- This library is available on GitHub & PyPi. It can be installed via pip and an operational SounderPy web-application can be found at sounderpysoundings.anvil.app.

Storm Chase Archive , Co-Developer	August 2024-present
Storm Chaser Coaching , Coach, Tour Guide	January 2024-present
Michigan Tornado Sounding Archive , Sole Developer	June 2022-May 2024
US Tornadoes Case Archive , Co-Author	Spring 2023
MetPy , Contributor	August 2023

4 CONFERENCE PRESENTATIONS

4.1 POSTERS

- Gillett, K. J., March 2024: **SounderPy: A Sounding Visualization Tool for Severe-Weather Analysis and Forecasting**, Central Iowa National Weather Association Severe Storms and Doppler Radar Conference.

4.2 PRESENTATIONS

- Nixon, C., Gillett, K., Tang, J., Fowkes, H., February 2025: **Chase Archive: Introducing the biggest collection of storm chases on the web. For chasers, by Chasers.**, National Storm Chaser Summit.
- Gillett, K., May 2025: **A Simple Guide to Forecasting the Northern Lights: Auroral Substorms**, Seminar for Local Atmospheric Research.

4.3 OTHER INVITED TALKS

- **Space Weather Forecasting**, University of North Dakota, April 2025

5 PUBLICATIONS

5.1 PAPERS

- Gillett, K. J., March 2025: **SounderPy: An atmospheric sounding visualization and analysis tool for Python. J. Open-Source Software.**,
In Review.

6 TEACHING EXPERIENCE

Teaching Assistant, University of North Dakota, ATSC-411 Advanced Synoptic Meteorology, Fall 2025

Teaching Assistant, University of North Dakota, ATSC-405 Numerical Methods in Meteorology, Fall 2025

Teaching Assistant, University of North Dakota, ATSC-110 Introduction to Meteorology Lab, Fall 2025

Teaching Assistant, University of North Dakota, ATSC-110 Introduction to Meteorology Lab, Spring 2025

Teaching Assistant, University of North Dakota, ATSC-270 Computer Concepts in Meteorology, Spring 2025

Teaching Assistant, University of North Dakota, ATSC-411 Advanced Synoptic Meteorology, Fall 2024

Teaching Assistant, University of North Dakota, ATSC-405 Numerical Methods in Meteorology, Fall 2024

7 LEADERSHIP EXPERIENCE

National Weather Service Liaison, University of North Dakota Atmospheric Science Graduate Student Association, May 2025-present

President, Central Michigan University Student Chapter of the American Meteorological Society, April 2023-May 2024

Webmaster, Central Michigan University Student Chapter of the American Meteorological Society. April 2020-April 2023

8 RELATED EXPERIENCE

Full Time On-Air Broadcast Meteorologist, WNEM TV5, GRAY-TV, Saginaw-MI,
August 2022-August 2024

Freelance On-Air Broadcast Meteorologist, WLNS TV6, Nexstar Broadcasting,
Lansing-MI, October 2020-August 2021

Intern, KSNB Local4, GRAY -TV, Hastings-NE, June 2022-August 2022

Intern, WLNS TV6, Nexstar Broadcasting, Lansing-MI, June 2019-August 2019

9 AWARDS & HONORS

Outstanding Graduate Teaching Assistant – University of North Dakota, College of
Aerospace, Department of Atmospheric Science (2025)

Best Graduate Student Teaching Assistant – University of North Dakota Student
Chapter of the American Meteorological Society

Department Service Award – Central Michigan University Department of Earth &
Atmospheric Science

10 SERVICE

UND Atmospheric Science Graduate Student Association, Member & Officer, August
2024-present

UND Atmospheric Science Graduate Student Association, SCALAR Conference
Organizer, May 2024-present

UND Department of Atmospheric Science Osborne Weather Center Remodel,
January 2025-present

CMU Student Chapter of the American Meteorological Society, Member & Officer,
August 2018-May 2024

11 SKILLS

11.1 PROGRAMMING & DATA ANALYSIS

- Python (advanced)
- HTML/CSS (intermediate)
- Linux/Unix/WSL (intermediate)
- Shell Scripting (intermediate)
- VBA, MatLab, & FORTRAN (beginner)
- Cloud Model 1 (CM1), Weather Research & Forecast Model (WRF), (intermediate)
- LaTeX (intermediate)
- JSON, CSV, netCDF, GRIB, TXT

11.2 OTHER COMPUTER

- Microsoft Office
- Google Sheets/Drive etc
- Windows, Linux
- Gibson Ridge
- IDV
- Zoom & WebEx
- Adobe Lightroom, Photoshop, Premiere

12 FEATURED IN

Synoptic Analysis and Forecasting: An Introductory Toolkit, 2nd Edition, Shawn Milrad, 2025.