

# 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

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<b>M.S.</b> , Atmospheric Science, University of North Dakota	In progress
<b>B.S.</b> , Meteorology, Minor Mathematics, Central Michigan University	May 2024

## 2 RESEARCH EXPERIENCE

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<b>Master's Thesis Research</b> , University of North Dakota	In progress
<ul style="list-style-type: none"><li><b>Title:</b> <i>"An examination of the effects of storm interactions on tornadogenesis in numerical experiments"</i></li><li><b>Advisor:</b> Dr. Catherine Finley</li></ul>	
<b>Graduate Research Assistant</b> , University of North Dakota	June-August 2025
<ul style="list-style-type: none"><li><b>Project:</b> <i>"Using Aircraft Observations to Improve Tropical Cyclone Tornado Predictability Before Landfall"</i></li><li><b>Advisor:</b> Dr. Jacob Carstens</li></ul>	
<b>Undergraduate Research Assistant</b> , Central Michigan University	April-August 2023
<ul style="list-style-type: none"><li><b>Project:</b> <i>"Synoptic &amp; Mesoscale Variability of US Large Hail Environments"</i></li><li><b>Advisor:</b> Dr. John Allen</li></ul>	

## 3 PERSONAL PROJECT EXPERIENCE

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<b>SounderPy</b> , Sole Developer	July 2023-present
<ul style="list-style-type: none"><li>SounderPy is PyPi python package that retrieves and plots vertical profile data for meteorological analysis.</li></ul>	

- 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](https://sounderpysoundings.anvil.app).

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

## 4 CONFERENCE PRESENTATIONS

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### 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

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### 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

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**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

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**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**

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**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**

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**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**

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**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

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### 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

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