Kyle T. Brooks

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Research interests	Tropical Cyclones/Meteorology, Tornadoes and Supercells, QLCS, Radar Meteorology, Numerical weather prediction and modeling, machine learning, data assimilation

Education

University of Georgia Athens, Georgia, USA
M.S in Geography June 2022 – Present
Mentors: Dr. John A. Knox *Current GPA: 3.27*

University of Georgia Athens, Georgia, USA
B.S in Atmospheric Science, Geography Jan. 2020 – May 2022
Mentors: Dr. John A. Knox, Dr. James Marshall-Shepherd *Major GPA: 3.90*

Abraham Baldwin Agricultural College Tifton, Georgia, USA
A.S in Core Curriculum Aug. 2017 – Jul. 2019
Emphasis on Aeronautical Engineering

Relevant coursework

- Atmospheric Sciences: Introduction to Data Assimilation, Seminar in Earth Systems Modeling, Programming for Atmospheric Scientists, Mesoscale and Radar Meteorology, Atmospheric Dynamics I and II, Tropical Meteorology (Taking Summer '24)
- Data Science: Intro to GIS, Geographic Information Science, Data Science for Geographers, Machine Learning in Data Science (Spring '24)

Grants

Developing new storm design criteria for natural hazards planning research and practice (co-PI)
University of Georgia, 2021 Presidential Interdisciplinary Seed Grant
$135,052 Funded 1/22-6/23

Creation of a student-run, on-campus Numerical Weather Forecasting Model.
University of Georgia, 2023 UGA Student Technology Fee One-Time Funding Allocation
$43,000 Funded 1/23-4/25

WRF in the GEOG 1112 Curriculum.

University of Georgia, 2023 UGA Franklin College Teaching Enhancement and Innovation Grant.

$3,000   Funded 8/23-4/25

Research experience

"A Long Time 'Comin: Modeling the Impacts of a Direct Major Tropical Cyclone Landfall on Coastal Georgia

Mentors: Professor John A. Knox (UGA)   Jun. 23 – Present

Using WRF-ARW to model the Hurricane of 1898: the last major tropical cyclone to make landfall on the Georgia coast 125 years ago.

Developing new storm design criteria for natural hazards planning research and practice (co-PI)

Mentors: Professor John A. Knox (UGA)   Jun.'22 – Jul. '23

This was a presidential seed-grant project involving using data from the UGA mesonet. I worked closely with professionals in the field of climate/atmospheric sciences and even statistics to analyze massive datasets using mostly SQL and Python.

Thermodynamic Profiles of Extreme Precipitation Events in Taiwan

Mentors: Dr. Michael M. Bell (CSU)   Jun. '21 – Aug. '21

I studied the thermodynamic profiels of extreme precipitation events in Taiwan. I found results conclusive with literature. Here is where i fist started coding in Python and learned how to manipulate large datasets to do what I needed.

Teaching experience

Teaching assistant, Department of Geography (University of Georgia)
Fall 2023
GEOG 1112L: Introduction to Weather and Climate Lab
Coverage of all topics taught in main course from mesoscale meteorology to climate.

Teaching assistant, Department of Geography (University of Georgia)
Spring 2024
GEOG 1112L: Introduction to Weather and Climate Lab
Coverage of all topics taught in main course from mesoscale meteorology to climate.

Talks and tutorials

Hurricane Michael through the Georgia Mesonet   January 2023
2023 AMS Annual Meeting, Conference in Other Topics in Applied Climatology

Thermodynamic Profiles of Extreme Precip in Taiwan   January 2022
AMS Student Conference Poster Session

Skills	**Programming**
	Proficient in: Python, R, MATLAB
	Familiar with: SQL, Java, FORTRAN, C++

Operating Systems
Unix & Unix-like: Linux (Fedora, Ubuntu), MacOS
Windows

Clubs	**American Meteorological Society**	Aug. 2020 – Present
	UGA American Meteorological Society, Graduate Representative	
	Chi Epsilon Pi Atmospheric Science Honor Society	Aug. 2021 – Present
	UGA ASCII, Founder and President	Aug. 2023 – Present

Other interests	Biking, hiking, Music (Piano mostly), I enjoy programming and computer stuff too, some light video gaming