MAX K. APPELBAUM

Master's Graduate Research Assistant | University of Georgia, Department of Geography

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EDUCATION

Master of Science in Geography (Climate Science) *(in progress)* August 2022 – May 2024 *(expected)*

University of Georgia, Department of Geography

Major Advisor: Dr. Marshall J. Shepherd

Bachelor of Science in Atmospheric Sciences with Geography Minor 2022

University of Georgia, Department of Geography

LEADERSHIP POSITIONS HELD

Undergraduate and *(currently)* **Graduate Student Ambassador** 2020 – present

Office of Emergency Preparedness, University of Georgia

Club Historian 2021 – 2022

American Meteorological Society, University of Georgia Student Chapter

AWARDS AND NOMINATIONS

UGA Geography NCGE/AAG Outstanding Senior Award Nominee 2022

UGA Geography Engagement and Community Outreach Award Nominee 2022

PROFESSIONAL MEMBERSHIP

American Meteorological Society (AMS) 2020 – present

National Speleological Society (NSS) 2022 – present

RESEARCH INTERESTS

My research interests lie in characterizing, visualizing, and understanding urban heat effects via satellite remote sensing and in-situ drone-based and surface-based sensing methods. I am also interested in developing specialized sensor systems to be used for in-situ sensing. Additionally, I explore socioeconomic factors that affect the fine scale anatomy of urban heat island intensity.

My Master's thesis will focus on urban heat investigations of Augusta, Georgia, in partnership with the Savannah River National Laboratory and funded by the Department of Energy. As of February 2023, my thesis topic is in the final stage of development before writing and defending my thesis proposal.

RESEARCH AND PROJECT EXPERIENCE

SitS (Signals in the Soil): AWeSOMSense (A Wetland Soil Organic Matter Sensor)   University of Georgia

Undergraduate Research Assistant   June 2021 – May 2022

Principal Investigators:
- Dr. Deepak Mishra *(UGA Dept. of Geography)*
- Dr. Sonny Kim *(UGA College of Engineering)*
- Dr. Lakshmish Ramaswamy *(UGA Dept. of Computer Science)*
- Dr. In Kee Kim *(UGA Dept. of Computer Science)*
- Dr. Lori Sutter *(UNC Wilmington Biology and Marine Biology)*

Primary Roles :

1. Led the prototype design and construction of a durable and stable proximal-sensing platform to be deployed long-term in coastal salt marshes to collect soil organic matter data, following completion of rigorous testing.
2. Participated in Georgia coastal marsh field research to collect 1-meter soil cores and in-situ hyperspectral data.
3. Created detailed field site maps in ArcGIS to plan and prepare for field trips.
4. Assisted in the initial processing of in-situ soil cores and collect through-depth hyperspectral scans.
5. Assisted in the primary processing of hyperspectral that is to be used to train a machine-learning model to predict soil organic matter content of the marsh soil.

Investigating potential ecological lift of a hydrologically altered tidal creekshed in a Georgia, USA saltmarsh: A case study   University of Georgia

Field Data Collection Assistant (volunteer)   July 2021

Principal Investigators:
- Dr. Susan Wilde *(UGA Warnell School of Forestry)*
- Dr. Lori Sutter *(UNC Wilmington Biology and Marine Biology)*
- Katie Lamp'l *(UGA Warnell School of Forestry Master's Student, grad. 2021)*

Primary Roles:

1. Assisted with tidal creek discharge measurements, taken every 15 minutes for one complete tide cycle.
2. Collected water samples every 30 minutes throughout 1 complete tide cycle to be lab-analyzed for various water quality constituents.
3. Assisted in field equipment inspection, set-up, and tear-down.

ATSC *(Atmospheric Sciences)* **4170: Mesoscale and Radar Meteorology and Climatology**

Mock Weather Forecasting Team Member   University of Georgia

Professor: Dr. Marshall J. Shepherd   January 2021 – May 2021

Primary Roles:

1. Collaborated with a small team to create an NWS-style mesoscale weather briefing to be presented to the class.
2. Coordinated team members around COVID-19 restrictions to schedule virtual team meetings.
3. *Project Grade:* **A**

WORK EXPERIENCE

UGA Center for Teaching and Learning   Athens, Georgia

Student Assistant   January 2020 – May 2022

Primary Roles:
1. Worked two locations with different service responsibilities.
2. Assist instructors with minor audio/visual issues in the classroom and submit work orders for major audio/visual issues.
3. Perform opening and closing duties, as well as provide welcome desk assistance to building guests.

O'Reilly Auto Parts   Athens, Georgia

Shift Manager   May 2019 – November 2019

Primary Roles:
1. Completed daily/closing reports on paper and online to be evaluated by upper management.
2. Managed up to 4 other employees and ensured company policies were followed at all times.

Kauffman *(now Mavis)* **Discount Tire**   Athens, Georgia

Alignment Technician   September 2018 – December 2018

Primary Roles:
1. Performed thorough 18-point vehicle inspections and recommended maintenance.
2. Performed auto alignments, oil changes, tire changes, brake jobs, and suspension maintenance.

NON-ACADEMIC VOLUNTEER

Meteorology Merit Badge Instructor, *Boy Scouts of America, Northwest Georgia Council*

Conservation Volunteer, *Sandy Creek Nature Center, Athens, Georgia*

Defensive Driving Instructor, *TireRack Teen Street Survival Driving School, Chattanooga, Tennessee*

TECHNICAL PROGRAMS

ArcGIS Pro and ArcMap | ERDAS Imagine | ENVI | AutoCAD 3D and Autodesk Inventor | SolidWorks

MATLAB | Python | JupyterHub | Linux Command Line