Allison M Fagerson

Tel: 630-779-6712 | allisonfagerson@gmail.com|LinkedIn:www.linkedin.com/in/allison-fagerson-10497a218

EDUCATION

University of Colorado Boulder- Boulder,CO April 2022 – May 2024 (Expected)
M.S. in Atmospheric Science (GPA: 3.9/4.0)
Research Graduate Assistant in Atmospheric Science and Environmental Engineering

Texas A&M University- College Station, Tx August 2019 - Dec 2021
Bachelor in Meteorology (GPA: 4.0/4.0) and Mathematics (minor)
Honors: Summa Cum Laude
Research Assistant in Atmospheric Science and Atmospheric Chemistry

College of Dupage- Glen Ellyn, IL August 2015- May 2019
Associates in Science & Associates in Arts(GPA: 3.8/4.0)
Honors: Academic Honors & Deans List 2015-2019

WORK EXPERIENCE

Air Quality Research Boulder, CO
Data Analysis Assistant *- part time* May 2023 - Present

-Led the deployment of 37 Purple Air Sensors for a field project in suburban homes in Santa Rosa, California, ensuring comprehensive coverage and data collection.
-Applied data cleaning and filtering techniques to process sensor data, utilizing Purple Air AQI data retrieval methods for accurate analysis.
-Utilized filtered air quality data to update CONTAM Model, enhancing the accuracy and reliability of environmental modeling efforts.

1000 Gretas Climate Nonprofit Boulder, CO
Project Manager April 2023 - Present

-Developed and applied marketing strategies to effectively promote the latest grantees, enhancing their visibility and support.
-Acquired and implemented fundraising strategies, significantly increasing donor engagement and contributions through targeted social media campaigns.
-Orchestrated multiple successful fundraising events, demonstrating strong event planning and execution skills.
-Enhanced communication skills through ongoing learning and practical application in diverse project settings, improving team collaboration and stakeholder engagement.

Radar Research Boulder, CO
Data Analysis Assistant *- part time* January 2022 - May 2023

-Successfully mastered the operation of mobile radars and served as the primary operator throughout the project duration, ensuring consistent and accurate data collection.
-Acquired proficiency in cleaning radar data using Python functions, optimizing data quality and analysis processes.
-Expanded knowledge and proficiency in Linux commands, facilitating efficient data management and system operations.

-Utilized advanced radar visualization tools such as Lrose and Hawkeye to analyze and interpret radar data, enhancing project insights and outcomes.

University of Colorado Boulder Boulder, CO

Teachers Assistant *- part time* May 2023 - August 2023

-Conducted private office hours and provided tutoring to students across various class topics, offering personalized assistance and guidance to enhance understanding and academic performance.

-Offered homework help to students, addressing queries and clarifying concepts to support their learning objectives.

-Proficient in creating engaging and informative PowerPoint presentations for classroom instruction and academic presentations.

-Developed comprehensive lesson plans and delivered engaging lectures to undergraduate students on diverse subjects, ensuring clarity and comprehension.

-Responsible for grading homework assignments and various coursework, providing constructive feedback to students to facilitate their academic growth and development.

ACADEMIC PROJECTS

California Wildfire Project May 2023 - Present

- Currently engaged in a proactive phase of preparation for self-conducted fieldwork in air quality research.

- Demonstrated a strong aptitude for budgeting, procurement, and equipment acquisition, focusing on Purple Air air quality monitors and other low-cost air quality sensors.

- Acquired proficiency in the operation and calibration of air quality monitoring systems.

- Develop expertise in interpreting data from various low-cost air monitoring devices and employing data extraction, visualization, and interpretation techniques.

- Actively conducting fieldwork by strategically installing air quality monitors in 17 residential homes, contributing to a growing dataset for the project.

- Pioneering the mapping of homes for future modeling efforts, providing valuable observational data for comparative analysis and enhancing the overall research endeavor.

WINTRE-MIX Project January 2022 - May 2023

- Assumed a leadership role in the Winter-Mix field campaign, mastering the operation and maintenance of mobile radar systems.

- Independently managed radar equipment during inclement weather conditions, ensuring accurate data collection.

- Collaborated effectively within a team, overseeing data collection procedures.

- Applied advanced data cleaning techniques using Python and various analytical tools, facilitating subsequent data visualization for in-depth analysis.

Atmospheric Chemistry Research 2020-2021

- Participated in groundbreaking atmospheric chemistry research with a strong emphasis on laboratory work.
- Played a pivotal role in preparing solvents and achieving crystallization points for experimental purposes.
- Gained proficiency in operating spectroscopy lasers to assist in the investigation of ice nuclei particle composition.

Lightning Detection Network & Hurricane Harvey Research 2019-2020
- Conducted a comprehensive research project focused on the correlation between urbanization and increased rainfall rates during Hurricane Harvey.
- Extracted rainfall data from mesonet and other observational sites for analysis.
- Utilized Python coding to manage and analyze data, generating insightful visualizations for research purposes.

Publications & Presentations

Li, Guangyu, et al. "Physicochemical characterization and source apportionment of Arctic ice-nucleating particles observed in Ny-Ålesund in autumn 2019." *Atmospheric Chemistry and Physics* 23.18 (2023): 10489-10516. Link: https://acp.copernicus.org/articles/23/10489/2023/

Fagerson, Allison, et al. "Airflow Dynamics during a Mixed-Phase Winter Precipitation Event Using Radar Observations from WINTRE-MIX." *103rd AMS Annual Meeting*. AMS, 2023. Link: https://ams.confex.com/ams/103ANNUAL/meetingapp.cgi/Paper/419342

Fagerson, Allison, and Levi David Newell. "An analysis of the relationship between lightning activity and rainfall rates in Tropical Storm Beta." *101st American Meteorological Society Annual Meeting*. AMS, 2021.
Link:https://ams.confex.com/ams/101ANNUAL/meetingapp.cgi/Paper/385690

SKILLS

Programming Skills & Areas of Experience

- Python(3 Years), Matlab(1 year), R(1 year), IDL(1 year)
  - Numpy, Pandas, Pyart, Xarray, Scipy, Matlab
- Nist CONTAM Model
  - Quality control, Data analysis, visualization
- Low-Cost Air Quality Monitors
  - Purple Air, Atmotube, Greywolf, API Retreval
- COW/DOW Trained
  - Run mobile doppler radars, Quality control, Quick problem solver, Linux Commands
- Doppler Radar Data
  - Data analysis, Quality Control, Visualization, Lrose, Pyart, Homebrew, LaTex, Linux