

## EDUCATION

---

### Appalachian State University

#### Masters in Geography

May 2021

Thesis advised by Dr. Baker Perry

Thesis Topic

*Analytical Hierarchical Modeling of Glacial Lake Outburst Flood Potential in The Khumbu Region, Nepal*

This project created one of the most detailed hazard analyses of the Khumbu region to date, using cutting edge statistical modeling and remote sensing techniques to create a novel method of modeling GLOF Hazard.

#### Bachelor of Science in Geography

May 2019

#### Certificate in Geographic Information Systems (GIS)

#### Field of Study: Climate-Human Interactions

Emphasis on high altitude climate modeling, water resources, and in the field data collection. Assisted in conducting a month-long research trip in the Peruvian and Bolivian high country to take glacial measurements.

Advisors: Dr. Saskia van de Gevel, Dr. L. Baker Perry

## COURSES AND CODING LANGUAGES

---

Environmental Modeling with Remote Sensing

Advanced GIS Techniques

Familiar with several code languages (Python, R, Matlab)

Cartographic Design (Adobe Illustrator)

Remote Sensing Data Processing

Familiar with the use of climate reanalysis data (ERA-5)

## EXPERIENCE

---

- Daybreak GIS Consulting, LLC Fall 2022 – Present
  - Founder/President
  - Environmental Analysis utilizing various geographic data and methods
  - Completed solar inventory for the Town of Boone, NC Winter 2022
    - Deliverables included webmaps and databases to aid the town in its mission of becoming carbon neutral
- Instructor – Dept. of Geography and Planning Fall 2021 - Present
  - Updated labs and created
  - Instructed courses and labs between 12 and 100+ students
  - Courses: GHY 1010; GHY 1012; GHY 1012 Lab; GHY 3812; GHY3812 Lab
- Guide with River and Earth Adventures Summer 2020 – Spring 2022
  - Guided white water rafting, caving and nature hikes
  - Ran logistics for tubing operation on the New River
- Instructor of Record – GHY 2812 Summer 2020
  - Moved course to online format within several weeks

- COVID-19 restrictions
    - Received above average course evaluations
- Graduate Assistant – GHY 4810 Spring 2020
  - Assisted in the instruction and grading of Digital Image Processing
- Graduate Assistant – GHY 4816 Fall 2019
  - Assisted in the instruction and grading of GIScience and Water Resources
- Graduate Assistant – GHY 3310 Fall 2019
  - Assisted in the instruction and grading of Environmental Remote Sensing
- Wilderness Trail Maintainer Summer 2019
  - Employed by Southern Appalachian Wilderness Stewards and the USFS
  - USFS Class B Sawyer and Axman certified
  - Worked in high stress, isolated projects with a team of six
- Research Assistant Spring 2019 - 2021
  - Assisted with the National Geographic Rolex Perpetual Earth Exp
  - Data visualization and analysis
  - Weather forecasting and visualization
- Lab Instructor for Geospatial Data and Technology Spring 2019
  - Taught labs ranging from basic data collection to more advanced GIS techniques
- Research Assistant in the Appalachian Tree Ring Lab Spring 2019
  - Assisted in the cross dating of several tree record series
- Research Assistant to Dr. Baker Perry Spring 2018 - 2021
  - Assisted in the creation and maintenance of weather forecast model system
  - Utilize computer modeling and programming in MATLAB, Python and Linux
  - Helped complete a field campaign collecting samples from the highest peaks in the Central Andes
- Freelance General Construction Winter 2017 – present
  - Part of a team which completes home remodels as well as ground up construction/framing
    - Working in both team and individual environments
- UAV technology/GIS analysis Consultant Summer 2016- Spring 2018
  - Early member of the Research Triangle Institute's Drone Center
  - Created and maintained Geodatabases and information libraries
  - Assisted in the design and execution of drone-based research experiments
- Research Assistant and Expedition Photographer Summer 2016
  - The Black Channel research group
  - Documented an expedition on the Adamello glacier in northern Italy
  - Collected data, assisted with experimental design, created marketing content

## **RECOGNITION, AWARDS, and PUBLICATIONS**

---

- Oral Presentation – Student Research Day Spring 2021
  - Presented a 15 minute talk on GLOF Hazard Modeling
- Co-Author – *Weather* Fall 2020
  - ‘Direct observations of a Mt. Everest snowstorm from the world's highest surface-based radar observations’
  - Perry et al 2020
- Outstanding Graduate Student Spring 2020
- Eagle Scout
  - This involved writing a proposal, defending said proposal, fundraising and organizing a group of volunteer workers. For the project I lead a team in the creation of a multisensory educational fossil finding area for a school for those with learning disabilities.

## **LEADERSHIP ROLES**

---

- *GIS Club*
- *Appalachian Trail Crew president 2018-2021*

Builds and maintains local trails, including parts of the Appalachian. In 2018 we adopted the Profile Trail on Grandfather mountain.