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ABOUT US

The Team
CU GeoData is a student-run project team at Cornell which designs, builds, and deploys instrumentation capable of recording a large variety of atmospheric, geologic, and hydrologic data. We currently collaborate with a number of different organizations, including Cornell faculty and the Paleontological Research Institute, to generate accurate data and environmental assessment.

Our Work
By integrating Earth and atmospheric sciences with engineering, the team is uniquely positioned to address complex environmental issues that require a deep understanding of the natural systems at play. Through our innovative and collaborative work, CU GeoData contributes to the development of sustainable solutions that will help to protect our planet.
Prof. Wysocki aids the Air sub-team in maintaining connections with the Ithaca community and in securing locations for instrumentation deployment. As the New York State Climatologist, his counsel is deeply appreciated.

As CU GeoData's faculty advisor, Dr. Hysell meets with Team Leads on a weekly basis. He also provides guidance on complex technical issues during instrumentation development cycles.

Dr. Derry offers his rich experiences as a biogeochemist to CU GeoData's Water sub-team. Dr. Derry has been invaluable in connecting GeoData's HAB research with the wider Ithaca community.

Dr. Keranen regularly meets with the Rock sub-team to discuss soil moisture research. Dr. Keranen aids GeoData by providing access to land in Monkey Run Varna for field studies.
Established as an official Cornell Engineering Project Team with support from the Shen Fund. Dr. Hysell appointed as faculty advisor.

Air team completes the first tethersonde iteration, which will be deployed in the field in Spring 2023 to collect atmospheric data.

Started collaborations with Cayuga Nature Center and EAS faculty including Professor Hysell, Professor Keranen, Professor Wysocki, and Professor Derry. Plans to collaborate with the Finger Lakes Association on providing GIS visualizations are ongoing.

Air team continues work on deploying the tethersonde and strengthening the Northeast Weather Association (NEWA) network. Water team is currently working on harmful algal bloom (HAB) predictions and community outreach. Rock team is conducting fieldwork using NPK and GPR sensors to cross-analyze data relating to soil moisture levels and resistivity.
The Tethersonde

The Tethersonde is 324 cu. Ft. Balloon moored to an electronic winch. This sensing system acts as an atmospheric probe by lifting a sensor into the sky to take temperature, wind vector, pressure, and humidity profile soundings. The entire system was designed and fabricated by students on CU GeoData.

A Newer NEWA

CU GeoData is currently procuring 5 new ONSET weather stations to fill the gaps in the NEWA network surrounding Cayuga Lake. These stations will be donated to local entities in exchange for protected space.
ROCK SUB-TEAM

We utilize diverse engineering skill sets to improve understanding of soil resistivity, nutrient levels, and geospatial technology. The team’s current project involves building a Raspberry Pi-based OhmPi device that measures resistivity at various depths in the ground to help track soil moisture levels.

Soil Resistivity

The team is currently exploring the correlation between NPK (Nitrogen, Phosphorus, Potassium) levels in the soil to electrical resistivity and cross-analyzing the data with Ground Penetrating Radar (GPR) imaging.
Hydroelectric Demo

We are working on creating a hydroelectric screw turbine demo for the stream at the Cayuga Nature Center. The turbine will be placed in the stream along with a plaque explaining how it works as a demonstration for visitors.

HAB Prediction Model

This semester, we started a long-term project in collaboration with the Data sub-team to create a model to predict when a Harmful Algal Bloom (HAB) will occur.

GIS Modeling

For the past few semesters, we have been mapping factors known to contribute to HABs such as water temperature and phosphate levels.
### SPONSORSHIP LEVELS

#### LEGACY
- Onset weather station purchased and deployed in the Cornell Community with plaque with your name or company logo.
- All other Levels' benefits

#### GOLD
- Corporate logo on apparel, website, and social media
- Priority meetings with team members
- Information session open to the greater Cornell Community on behalf of your company
- All Silver and Bronze Level Benefits

#### SILVER
- Corporate logo on website and social media
- All Bronze Level Benefits

#### BRONZE
- Resume Book
- Added to patron list on website
WHY CONTRIBUTE?

CU GeoData was funded for the first three years by the Cornell Shen Fund for Social Impact, but we have big plans! We need your support to make impactful scientific discoveries for the long-haul. We want to be in a position where we can complete every project proposal.

CONTRIBUTIONS ENABLE US TO:

- MAKE MEANINGFUL SCIENTIFIC DISCOVERIES
- HELP OUR COMMUNITY
- BRING STUDENTS TOGETHER FROM ACROSS MULTIPLE DEPARTMENTS
- GAIN LEADERSHIP AND TECHNICAL SKILLS

SPONSORSHIP PERKKS:

- INCREASE YOUR RECRUITING PRESENCE ON CAMPUS
  Through direct access to CU GeoData members and recruiting events
- CU GEODATA RESUME BOOK
- BRANDING AND PR
  Through website, apparel, and social media
- TAX DEDUCTIBLE CONTRIBUTIONS
Contact Us

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