INTRODUCING

The GEOS Center

GIS & Earth-Observing Services at UC Santa Barbara

A dynamic recharge center built to expand UCSB's geospatial capacity, deliver projects efficiently, and train the next generation of GIS professionals through real-world projects

geos.spatial.ucsb.edu · *geos@geog.ucsb.edu*

OUR PURPOSE

Why the GEOS Center exists

GEOS is a recharge center that turns UCSB's geospatial expertise into a service the whole university can use — and a training ground that prepares students for the field

01

Build university capacity

Make geospatial analysis, drone imagery, and custom dashboards a standard tool for any UCSB researcher, department, or program.

02

Deliver projects efficiently

A coordinated team that scopes and executes geospatial work faster — with internal recharge billing that keeps it simple.

03

Train the next generation

Pay students to work on real projects with real clients — graduating GIS professionals who already have a portfolio of work.

WHAT WE DO

A versatile geospatial team

From a single drone flight to a full data pipeline — if you need something geospatial, we can probably build it.

Drone Data Collection

Survey-grade aerial imagery with our Wingtra Ray fixed-wing VTOL drone.

Remote Sensing

Multispectral imagery, NDVI, vegetation & habitat analysis (RedEdge incoming).

GIS & Spatial Analysis

Advanced spatial analysis, cartography, and rigorous geographic data science.

Geospatial Dashboards

Interactive web maps and dashboards for research, operations, and the public.

Geo-AI & Modeling

Predictive modeling, change detection, and computer vision on aerial imagery.

3D & Digital Twins

High-fidelity 3D models of campuses, preserves, and study sites.

OUR TEAM

The people behind GEOS

Housed within the Spatial Center at UCSB. A core leadership team plus rotating student talent across graduate and undergraduate programs.

Dr. Trisalyn Nelson

Center Director

trisalyn@ucsb.edu

Lizzy Schattle

Center Manager

schattle@ucsb.edu

Will Overbye-Thompson

GIS Developer

Dashboards & 3D

Dr. Rose Sarigai

GIS Researcher

Workshops & Research

Student Workers

Grad & Undergrad

Real-world projects

RECHARGE RATES

Hourly rates

Role	Current Rate (UC / External)	Expected — July 2026 (UC / External)
Facility Manager	**$49 / $78**	$91 / $143
Student Group	**$25 / $41**	$32 / $51
GIS Developer	—	$51 / $80
GIS Researcher	—	$67/ $105

Rates and roles are subject to UCSB recharge committee approval.

PROJECT SPOTLIGHT

UCSB Campus Aerial Map

Sub-centimeter aerial imagery of the entire UCSB campus.

RESOLUTION

0.09" GSD — sub-centimeter precision

PLATFORM

Wingtra Ray fixed-wing VTOL drone

COVERAGE

300 acres of campus surveyed in 4 flights

USE CASES

Facilities planning, infrastructure inspection, change detection, land use mapping, and more

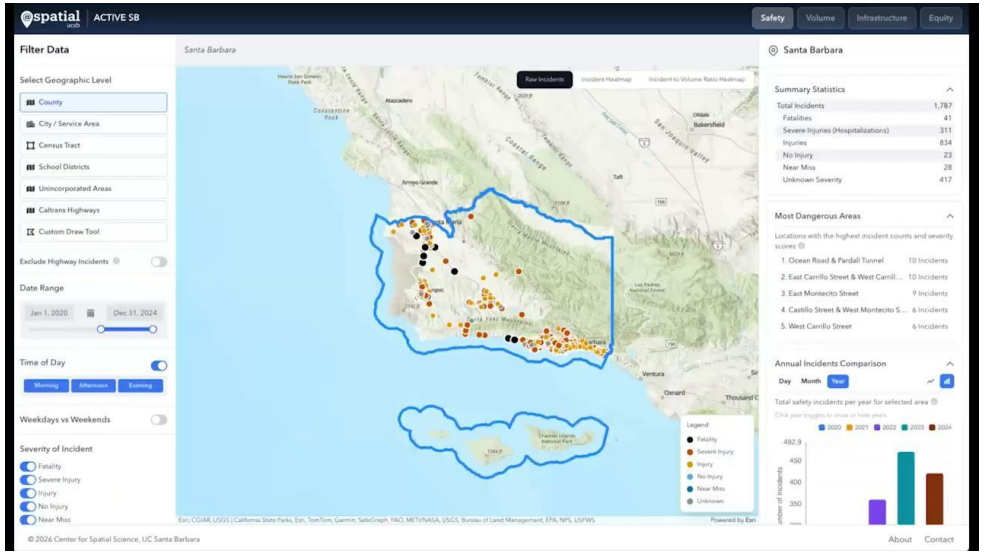
geos@geog.ucsb.edu

GEOS Center · UC Santa Barbara

PROJECT SPOTLIGHT

SB Active Transportation Dashboard

sbactivetransport.org · a live, public-facing geospatial web platform

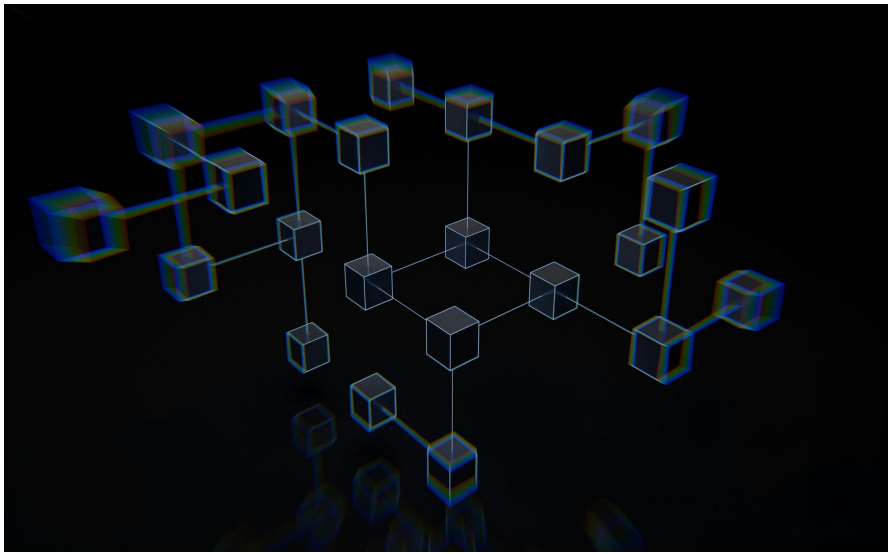


- Interactive web map tracking active transportation across Santa Barbara County
- Real-time data layers for cycling, walking, and transit infrastructure
- Custom-built in the Spatial Center, from data pipeline to front-end visualization
- Replicable framework: transportation, planning, environment, infrastructure, and beyond

PROJECT SPOTLIGHT

Digital Twin of the Dangermond Preserve

in collaboration with The Nature Conservancy



- High-fidelity 3D model of the Jack & Laura Dangermond Preserve — one of California's most ecologically significant landscapes.
- Integrates terrain, vegetation, and environmental data into a navigable, real-time 3D environment.
- Built for planning & research: conservation management, habitat monitoring, public education.
- Scalable framework — the same approach applies to any site, campus, district, or region.

WHAT'S NEXT

Expanding our toolkit

What we can offer your future projects

INCOMING

MicaSense RedEdge

Multi-spectral drone imagery for NDVI, crop and vegetation health, habitat mapping, and precision agriculture.

IN DEVELOPMENT

Geo-AI Pipelines

Automated feature extraction, change detection, and object recognition at scale — applied to aerial imagery.

Don't see what you need? We build custom geospatial solutions across engineering, architecture, planning, environmental science, and beyond — let's talk.

WHY IT MATTERS

A dynamic center for any geospatial need

GEOS is built to flex. Drone surveys, public dashboards, and digital twins, alongside whatever your project needs next.

Lowers barriers

Faculty and staff can fold GIS into their work without starting up a team

Funded student work

Paid, real-world projects build portfolios — not just classroom exercises

Builds UCSB capacity

A growing internal bench of geospatial expertise and visibility

Bridges research & practice

Academic rigor meets the practical needs of partners and the community

LET'S WORK TOGETHER

Ready to map your next project?

01

Reach out about a project

Write GIS services into upcoming grant proposals, or enhance an existing report with mapping, analysis, or data visualization.

02

Refer someone to GEOS

Smaller-scale projects with available data — academic or otherwise — are ideal for our student workers and a great way to support training.

Lizzy Schattle · GEOS Manager

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WEBSITE

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