Bruce Markman

bmarkman1234@gmail.com | (858) 342-2386 | Website

Highly skilled geospatial professional with experience in GIS, remote sensing, and AI integration, developing scalable workflows for land cover classification, biomass modeling, and environmental decision-making. Passionate about sustainability and conservation.

EDUCATION

Master of Science (M.S.) in Geography — 2023 - 2025

San Diego State University

Thesis: Estimating Residual Dry Matter across Conservation Grazing Lands with Field Spectroscopy and UAV LiDAR
Concentration: GIScience and Remote Sensing
Activities: American Society for Photogrammetry and Remote Sensing President (2024-25)

Bachelor of Science (B.S.) in Wildlife, Fish, & Conservation Biology — 2018 - 2022

University of California - Davis

Minor: Geographic Information Systems
Activities: The Wildlife Society Chapter Representative (2019-2022)

PROFESSIONAL EXPERIENCE

GIS Analyst — September 2025 – March 2026

Chen Ryan Associates — **San Diego, CA**

- Conducted GIS database management and QA/QC supporting the City of Hemet Safe Routes to School program as part of a Comprehensive Safety Action Plan used by planners and decision-makers
- Developed existing conditions and planning maps for General Plan Updates, Community Plan Updates, and transportation planning proposals across Southern California
- Collaborated with staff on restructuring the City of San Diego Pavement's schema for classifying roadway networks across the city using semi-automated classification methods and conducting thorough QA/QC
- Performed UAV flights for active transportation and infrastructure planning projects across Southern California to support engineering and planning teams

Graduate Research Assistant — August 2023 – June 2025

San Diego State University — **San Diego, CA**

- Collaborated with The Nature Conservancy (TNC) ecologists and NASA researchers on field-calibrating and validating hyperspectral imagery and UAV LiDAR to monitor residual dry matter across California Rangelands for grazing and wildfire fuels management at Dawson Los Monos Canyon Reserve (UCSD) and Jack & Laura Dangermond Preserve (TNC). This project led to a peer-reviewed publication in the journal *Remote Sensing: https://doi.org/10.3390/rs17142352*
- Served as President of the American Society of Photogrammetry and Remote Sensing (ASPRS) and led the acquisition of over $50,000 in grant funds to support student-professional networking activities in the geospatial and environmental research fields

Natural Resources Management Intern (GIS) **May – August 2024**
City of San Diego **San Diego, CA**

- Supported the San Diego Management and Monitoring Program with Inspect and Manage rare plant field surveys across Open Space properties with ESRI Fieldmaps
- Maintained and updated ESRI ArcGIS Enterprise Rare and Endangered Species databases

Research Fellow **June – September 2022**
National Center for Sustainable Transportation (NCST) **Davis, CA**

- Collaborated with scientists at UC Davis and Universidad Complutense de Madrid to study the impacts of traffic noise and light on Mountain Lion (*Puma concolor*) movement using environmental and species data
- Managed camera traps at remote field sites, assessed wildlife movements, maintained internal databases, and created visualized environmental data via mapping
- Prepared geospatial data for a peer-reviewed manuscript on Mountain Lion habitat selection based on nearby night lighting in human-dominated landscapes: *https://doi.org/10.1098/rstb.2022.0370*

Seasonal GIS Analyst **December 2020 – August 2021**
San Dieguito River Park JPA **San Diego, CA**

- Mapped *Arundo donax* in the park with UAV imagery to determine invasive species spread after 2010-2012 treatment by the California Invasive Plant Council
- Initiated and completed burn scar analysis from the 2007 Witch Creek fire using satellite imagery to understand wildfire spatial patterns and impacts on native vegetation

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AWARDS & HONORS

SDSU Master's Research Scholarship	2024
McFarland Geography Scholarship	2024
Richard Wright Award in Cartography	2024
Pitt Virginia Warner Endowed Scholarship	2024
William and Vivian Finch Scholarship in Remote Sensing	2024
Oren Pollak Memorial Research Fund, The Nature Conservancy	2023
National Center for Sustainable Transportation Research Fellow	2022

TECHNICAL SKILLS

Certifications: FAA Part 107 Certified Drone Pilot, IT Automation with Python, Association of Environmental Professionals CEQA Practicum and Advanced CEQA Course Certificate, WebGIS Ascension Workshop Certificate, AI Fluency & Framework Foundations (Anthropic)

Scripting and Programming: Python, R, Javascript, HTML, CSS, Git/Github, Codex/Claude Code

GIS & Spatial Software: ESRI Suite (ArcGIS Pro, Field Maps, Experience Builder), QGIS, ENVI, Google Earth Engine, LP360, LAStools, TransCAD

Remote Sensing Technologies: UAV Operating and Imaging, Photogrammetry, UAV LiDAR, Imaging Spectroscopy, Satellite imagery acquisition and processing

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LANGUAGES

English, Russian (heritage), **Spanish** (elementary)