ANNIE (YU-YUN) RUAN

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As a passionate geospatial analyst focusing on ecological conservation, I strive to leverage big data to mitigate environmental impacts, promote natural ecosystems' recovery, and reduce global warming's effects.

EDUCATION

Clark University, GPA: 3.8   Worcester, MA
M.Sc. in Geographic Information Science (Conservation Application)   *2021- Dec 2023*
National Dong-Hwa University   Hualien, Taiwan
B.S. in Natural Resources and Environmental Studies (Ecology and Conservation, Environmental Policy Management)   *2014-2018*

SKILLS

Highlights: Spatial analysis, Cartography, Remote sensing, Image supervised and unsupervised classification, Image segmentation, Machine learning (Random Forest), Fieldwork (Wildlife Radio Telemetry, Wildlife Identification)
Programming: Python (ArcPy, Pandas, NumPy), R, SQL, HTML, JavaScript
Software: Esri Products (ArcMap, ArcGIS Pro, ArcGIS Online, Survey123), QGIS, Terrest, OpenStreetMap, PostgreSQL (PostGIS), Google Earth Engine, Fragstats,GitHub

EXPERIENCE

Student Assistant   Palm Spring, CA
ESRI Developer Summit 2023   *Mar, 2023*
- Provide support in registration and attended to session attendees, to ensure a seamless and enriching conference experience. Assist participants with inquiries, guiding them through the event, and addressing their needs effectively.

Associate Assistant   Taichung, Taiwan
Union Land Administration Agent Office   *Mar, 2019 - Jan, 2021*
- Facilitate effective communication and collaboration between the company and public sector entities. Provided comprehensive administrative support to optimize office operations and enhance overall efficiency.

Research Assistant   Hualien, Taiwan
National Dong Hwa University   *Sep, 2016 - Jun, 2018*
- Assist in multiple international research projects, including the investigation of terrestrial ecology in the East Coast National Scenic Area of Taiwan, the resilience of the social-ecological system in the Central East Rift Valley of Taiwan, and the long-term forest dynamics plot investigation in the Pasoh Forest Reserve of Malaysia.
- Assist with installing and maintaining field equipment, such as infrared cameras, and conducted data collection (N = 30) and analysis in R. Tracked and identified mammal and plant species through field investigations and surveys, providing valuable insights for the project.

PAST PROJECTS

Long-Term Land Cover Changes around Pasoh Forest Reserve: Peninsular Malaysia 1998 – 2010   *Dec, 2022*
- Perform supervised classification on Terrset with 10-year land use data on Pasoh Forest Reserve.
- Identify significant changes in agricultural and soil areas due to replanting after clearcutting activities. Noted a negative standard deviation in NDVI image subtraction results within the protected area, potentially associated with increased wild pig populations.

Risk Assessment of Wildlife-Vehicle Collisions for Black Bears in Southern Florida: A Land-Use Perspective   *May, 2022*
- Utilize PostgreSQL to analyze black bear roadkill records, examine land use changes around roadkill points, and explore environmental characteristics as predictors of wildlife-vehicle conflict (WVC) locations.
- Highlight the significance of comprehending the impact of land use change on vulnerable animal populations facing high extinction risks due to WVC and roadkill incidents.

Distinguishing Gilbertiodendron Dewevrei and Mixed Forest in the Okapi Wildlife Reserve, Democratic Republic of Congo, using multi-source satellite data.   *May, 2022*
- Utilized remote sensing and machine learning in R to analyze forest diversity in the DRC Forest,generated precise maps for the Okapi Wildlife Reserve, supporting conservation and regional forest dynamics analysis.
- Evaluated map accuracy, compared Sentinel-2 and PlanetScope datasets, and offered insights on their strengths and weaknesses, enriching the understanding of forest dynamics and conservation efforts.