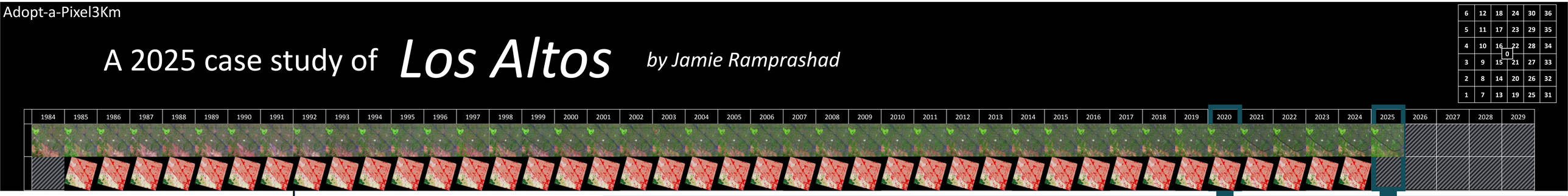
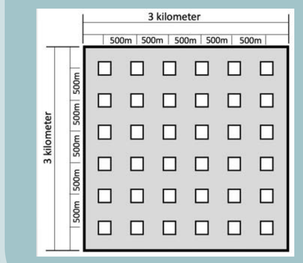
Adopt-a-Pixel3Km

A 2025 case study of *Los Altos*

by Jamie Ramprashad

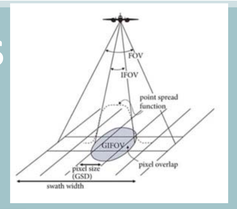


AaP3Km methods



Sample an area on Earth

remote Sensing ground to Satellite platforms



Discussion Summary

Despite significant statistical increases in population and urbanization in Los Altos over the last 40+ years, satellite imagery falls short in precisely expressing these trends. The Rancho San Antonio preserve area located in the bottom left region of the AOI plane appears relatively untouched in Landsat Time Series photos, and the suburban areas don't show signs of significant development changes. This may be due to the inability of satellite imagery to capture fine details across great expanses, suggesting that population and urbanization increases in Los Altos have made the region's urban/suburban areas more dense rather than larger in area. In fact, from 1984 to 2025, Landsat maps show greater amounts of greenery throughout the AOI plane, which is further reflected in the present-day Globe observations and other satellite data.

Conclusions | Recommendations

The land cover reflected across different satellite data generally tends to show similar results and trends, primarily differing as a result of different levels of precision in data. Similarly, field data taken through the Globe Observer App expresses greater diversity in land cover types, especially showing more nature and greenery, due to an even greater precision as data was collected on the surface rather than remotely.

References

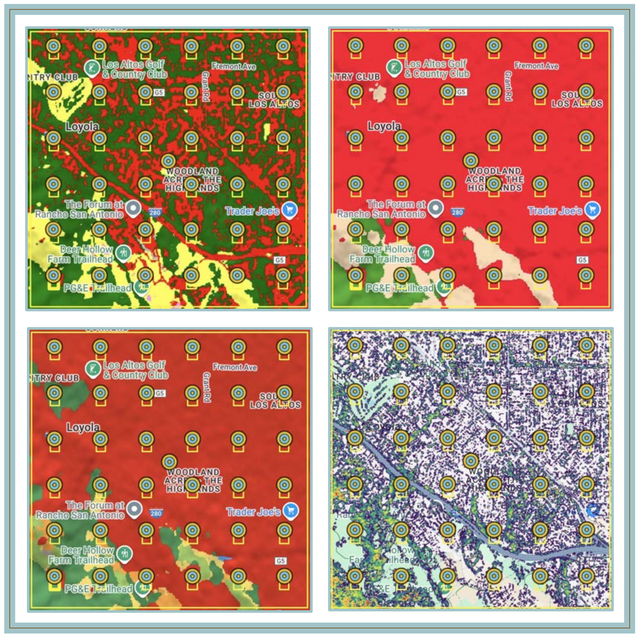
Nelson, P.V., Low, R., Kohl, H., Overoye, D., Yang, D., Huang, X., Chellappan, S., Azam, F.B., Carney, R.M., Falk, M., Garriga, J., Schelkin, L., Boger, R. and Schwerin, T. (2024) 'GLOBE Observer: A Case Study in Advancing Earth System Knowledge with AI-Powered Citizen Science', Citizen Science: Theory and Practice, 9(1), p. 33. Available at: https://doi.org/10.5334/cstp.747.

Community Chronicles | Results

Over the past few decades, Los Altos has seen a drastic increase in urbanization and diversity while also suffering from increased dryness and heat. More infrastructure is being built every year and there is a constant influx of new families coming to live in the Bay Area, contributing to rising prices and crowding. However, despite so much urbanization, significant amounts of greenery are present throughout urban and suburban communities, and Los Altos is also home to an over-4,000 acre wildlife preserve.

I wonder if the balance between Los Altos' urbanization and greenery is accurately reflected in satellite data.

Data across different sources generally expresses similar results: a prevalence of urban land and tree cover throughout the suburban areas and a dominance of tree cover and grass in rural areas.



*icons on columns 2-5
completely agrees
somewhat agrees
disagrees