National Geographic Society

Building a Living Map of the World

Vision:

National Geographic Society, working with partners at Google and World Resources Institute, is building a living map of the world. Our vision is to produce the world's first open global time series map of land cover and land use at 10m resolution with annual updates using public satellite imagery.

A living map of the world is a foundational dataset for knowledge products driving understanding and forecasting of the world as a system and enabling data-driven conservation, resource management and policy making for sustainable development.

Simultaneous advances in global satellite imagery, super-computing on demand in commercial cloud, and powerful open source machine learning algorithms in high-performance software frameworks, combine to enable production of a global time series map of land cover and land use at a scale, speed and cost that is within reach for large NGOs and global governments.

Our Need:

The major roadblock to production of a global time series map is availability of a large quantity of high-quality annotated data (hundreds of millions of labeled pixels) required to train algorithms to automate production of the map time series.

National Geographic is calling on the community of land cover and photo interpretation experts to help us annotate and curate Sentinel-2 satellite imagery needed by the machine learning algorithms.

Timeline:

National Geographic is aiming to create an initial training dataset of densely annotated tiles of Sentinel-2 imagery before September, following an expert-defined land cover taxonomy. We are seeking experts who can spend 20-40 hours on this task in the next 6-8 weeks.

This expert-labeled tile set will be used to train a large non-expert crowd to produce tens of thousands of additional labeled scenes, which will then be used to train the machine learning algorithms that produce maps.

If you are interested, please send your resume to gsaccocio@ngs.org.