Proposal: Transform Common Practice data into a GEE geospatial product

We are looking for a group of high energy students passionate about climate change that want to make an impact on the world.

Company Background

Perennial (www.perennial.earth) is a research and technology company developing innovative methods to incentivize and scale the adoption of regenerative agriculture programs. Based in Boulder, Colorado USA, the company has been working for multiple years to commercialize ongoing research in data-driven modeling and land remote sensing for scalable, robust digital soil mapping (DSM) carbon quantification. Perennial has received public and private funding to provide efficient, accurate, low-cost carbon measurement technologies and powerful digital tools for agricultural carbon projects, and is trusted by companies, farms, and organizations throughout the United States. Perennial's industry-leading technology has been recognized by TIME, Forbes, NASA, and Fast Company.

Project Summary

Perennial customers (Project Developers) in the carbon market (Verra VM 42) are required to make sure that the practice that their farmers/ranchers are adopting is not 'common practice' in the area they are so as to count towards additionality.

Common practice is defined as greater than 20 percent adoption. To demonstrate that a project activity or suite of activities is not common practice, the project proponent must show that the weighted mean adoption rate of the two (or more) predominant proposed project activities within the project spatial boundary is below 20 percent.

This is to make sure the land has not been deforested or that is has not changed considerably of use type that it will affect the carbon and emissions on it. We are looking to be able to identify with only using a geospatial polygon what are the common practices that would determine a land is not eligibile for a carbon program due to not having additionality.

A user would upload a polygon (geospatial data) to Perennial Platform, which would hit an API endpoint at upload towards the GEE product (Common Practice) that would retrieve back the data around what practices are common in that area. Perennial Platform will review the data coming from the API against the data provided by the project developer around what practices are being adopted (or potentially adopted) in that farm and provide a status of eligibilility or not.

The Team

Preferred Time Size 3-4

Location

Remote

Intellectual Property

- Each team member will be asked to sign an NDA with JD Carluccio and Perennial.
- Perennial would require that the project and all parts be assigned to and owned by the company

Student Benefit

- Opportunity to work on the development of a geospatial product in a very nascent and fast growing field (geospatial engineering)
- Learn to utilize Google Earth Engine, main geospatial tool utilized by climate tech companies
- Positively impact climate change by working on something that matters
- Potential future internship opportunities available

Useful Skills/Software

React

JavaScript/Python

Contact Information

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