South Pole

South Pole is a Swiss carbon finance consultancy founded in 2006 in Zurich, Switzerland. South Pole's business covers project and technology finance, data and advisory on sustainability risks and opportunities, as well as the development of environmental commodities such as carbon and renewable energy credits.

Project Description

This project will have three parts. South Pole is mostly looking to **evaluate distributed ledger technology as a way to help increase the transparency and trustworthiness of the carbon markets. This case will be different from HDAG cases in the past since we'll also be working with a team from Harvard Blockchain Club with more blockchain-specific experience.** The HDAG and HBC team will attempt to tackle all three of the goals listed below over the course of the semester:

1. Make a first assessment in what ways DLT can provide that additional quality control and what is required to make that happen.
2. Explore a couple of DLT protocols and see which one fits our requirements best
3. Pick one protocol and develop a proof of concept for one or more project types (forestry, agriculture or renewable energy) focussing on the origination, verification and potential fractionalisation of the asset.

Internal Partners: Wouter Oosterheert - Head of Data Science at South Pole

Datasets: For the initial phase of the proof of concept we can use data previously collected for certifying one of our historic projects to mimic the origination process.

Preferred Coding Languages: Python, Javascript

Some protocols that we currently have in scope, but that list can be extended:

- CHIA, TOUCAN / Polygon, NEAR, Ethereum, Binance chain, EWC

Specific Skills

1. Research: Determining how DLT can be viable in this domain. Choose which protocols will be most suitable to our project.
2. Data Analysis and Interpretability: Analyzing the provided dataset to come up with useful interpretations and outtakes. Communicating the limits and findings of any model(s) to the client
3. Model Creation: Creating a model that verifies the origination and amount of carbon offset

Expected Technical Difficulty: **Intermediate / Advanced**