Technical Support Engineer Challenge

Summary

Time: within 1 week of receiving this challenge
Expected result: a Jupyter notebook
How to submit: send an email with the GitHub repository URL to Tomris Özge Göksen

Task

Green-Plant Management GmbH is a company specializing in vegetation management solutions, that primarily uses optical satellite imagery. Currently, they are focused on a government project aimed at monitoring deforestation in the Amazonas region via time-series analysis. To accomplish this, they want to use UP42 and Sentinel-2 images.

They are concerned about the availability of satellite images within their designated area of interest (AOI). They want to construct a tailored pipeline using the UP42 API or UP42 Python SDK, thereby automating the entire process.

As a Technical Support Engineer, you need to develop a Jupyter notebook for Green-Plant Management GmbH.

When creating your solution, consider the following:

- Provide your solution in a Jupyter notebook hosted in a dedicated GitHub repository.
- Make use of Rasterio, Numpy, or Geopandas.
- Implement SpatioTemporal Asset Catalog (STAC).
- Use NDVI for the time series analysis.
- Focus on an area of interest (AOI) of your choosing. Use a small AOI, no need to do a general nation-wide forestry survey.
- The time range of the time series is up to you. Make sure it's logical and representative.

The solution should be easy and understandable, it doesn't have to be perfect.

If you have any questions, reach out to us via this email: **support@up42.com**.

What's next?

Send an email with the GitHub repository URL to Tomris Özge Göksen.

After we receive the solution, we will let you know within 3 working days about the next steps. If the challenge has been successfully completed, you'll be expected to explain the logic of your solution and outcomes (10 minutes).