

# Sample Feasibility Study

## Objective

This interview process aims to evaluate candidates' work on real-world problems they may face while working at Orbital Insight. The candidate asked to present to Orbital Insight team members.

## Background

- The sample feasibility study represents a hypothetical question posed by a client. The solution engineer is responsible for conducting an experiment and creating a presentation to determine if it's possible to achieve what the client is asking.
- The SE must present their findings both internally as well as the client. This evaluation will only focus on the internal presentation.
- A feasibility study is not meant to be a specific project with a definitive answer; the objective is to demonstrate whether something seems reasonably possible or not.
- A SE must make assumptions because there usually is a lack of complete information.

The key skills we are looking to evaluate in this section are the following:

- Data analysis ability on a problem that is indicative of actual client work
- Presentation ability
- Basic coding skill
- Defining the problem/objective
- logical explanation and workflow
- The understanding audience and ensuring the presentation caters to the different stakeholders.
- Answering potentially challenging questions on the fly
- Application of good analytical practices and ability to explain the reasoning behind choices
- Understanding the chosen approach's weaknesses/assumptions
- Creativity when developing your approach

## Client Question and Context

As Orbital Insight Solution Engineer, you had received an email like the below from one of your customers, ABC Asset Management, an asset management company that invests funds mainly into stocks, bonds, and real estate.

*From: Richard Smith  
To: OI Solution Engineer*

*Hi SE,*

*We plan to have our meeting in 3 days with the heads of research to assess if your geolocation dataset can be used to follow the analysis in two different locations.*

*Location 1: James Hardie Manufacturing Plant in TX, USA*

- Are we able to use your geolocation data to predict their stock price by looking at the foot traffic in this plant?*

*Location 2: Dyno Nobel LA Ammonia LLC Plant in Waggaman, LA, USA*

- We are thinking of seeing any abnormal activities during plants' turnaround/outage done in Jan 2021 in this plant and applying that principle to other plants to detect outages using your geolocation data. Is it feasible?*

*Could you run some initial analyses and let me know our approach is valid, and let us know your thoughts? I'm sharing our geolocation data on those two sites now.*

*Thanks,  
Richard  
ABC Asset Management*

You will give your internal presentation to Richard, who determines whether his approaches are possible and want to engage in this opportunity. The sales lead may also be in the meeting. Please, plan for 45 minutes of presentation and 15 minutes of questions.

## Data & References

### - About our geolocation data

Orbital Insight's GO Platform produces Geolocation - Foot Traffic data to reflect the movement and accumulation of objects with inherent telemetry-based sensor technology. Mobile devices, such as cellular phones and tablets, are the most commonly used geolocation devices for measuring human foot traffic. GO Create provides the cumulative device counts for mobile devices found in areas of interest (AOIs) over time. The Daily Unique Device Count (DUDC) is a raw count of the unique pings found within the point of interest boundaries (building footprint polygons).

## - How to Access our geolocation data

The geolocation data can be obtained from our Orbital Insight GO API using Python 3.

*For location 1 use RESULT\_ID = 2f7fdee5-31bf-4640-988c-40cb9f180ae7*

*For location 2 use RESULT\_ID = 40ba8836-4c83-436c-bdfc-833d82945c2f*

*For token use demo TOKEN = 760db46e790dd06b5cba081adc7669cbc037dc51*

```
import requests

url =
"https://go-services.orbitalinsight.com/api/v2/go/projects/u8oXupXXYg-210510/versions/u8oXupXXYg-210510-1.0.0/results/%RESULT_ID%/timeseries/raw.count"

querystring = {"format":"json","offset":"0","limit":"100","token":"%TOKEN%"}

headers = {
    "Accept": "text/csv",
    "X-Orbitalinsight-Auth-Token": "%TOKEN%"
}

response = requests.request("GET", url, headers=headers, params=querystring)

print(response.text)
```