Informe OSINT – SEINTPL Spring Quiz 2025

Gravity

Abstract

The SEINT 2025 Spring Challenge presents a single-task OSINT (Open Source Intelligence) exercise, in which participants are required to extract specific pieces of information from a single image. The objective is to analyze visual and contextual clues within the image to construct a password string. This password, when processed as an MD5 hash, serves to unlock a digital badge as proof of successful completion. Full challenge details and materials are available at: `https://github.com/seintpl/osintquiz/tree/main/2025_spring`.

1 Challenge Description

SEINT 2025 – Quick Spring Quiz

Welcome to the SEINT 2025 quick spring quiz! In this repository you will find a password-protected archive of this task's badge. This quiz has only one task!
To unlock the badge, make the MD5 hash of the answer, which consists of these words:

1. **What city is this?** Take the first 3 characters of its name.
2. **How are these cities connected? What are they to each other?** Take the first word of the two that describe their relationship.
3. **What are the people waiting for at this exact place?** Take the first of the two words.
4. **What is the approximate time this photo was taken?** Take 2 digits of the approximate hour.

These words combined together, in this pattern: `aaabbbbbbccccddd`, turned into an MD5 hash, will unlock the badge.
To make the MD5 hash of the password, use only lowercase Latin letters (and numbers or other characters if needed).
For example, if the answer is "The White Rabbit", you have to make an MD5 hash of `the white rabbit` (without quotes), which in this case is `3431c695575ec664aebd5490fc1756b5`. Use that hash to unlock the next level and see how deep the rabbit hole goes. For MD5 hashes, you can use CyberChef or this tool or any other.
Have fun!

Figure 1: Image provided for the challenge

2 Step-by-Step Analysis

The image under analysis presents a directional signpost featuring the names of multiple cities along with their respective distances, clearly expressed in **miles**. The presence of bright daylight suggests that the photo was taken sometime close to noon. Additionally, the background reveals a variety of flowering plants, trees, and a nearby building, offering further contextual cues.

Prior to conducting a reverse image search, it is possible to hypothesize the likely country where the image was taken. The use of miles as a unit of measurement strongly suggests it originates from the United States, the United Kingdom, or Puerto Rico. However, the significant distances indicated for cities such as Cork (5083 mi) and Paris (5570 mi) make it unlikely that the image was captured in the United Kingdom. Based on this inference, a reverse image search was performed.

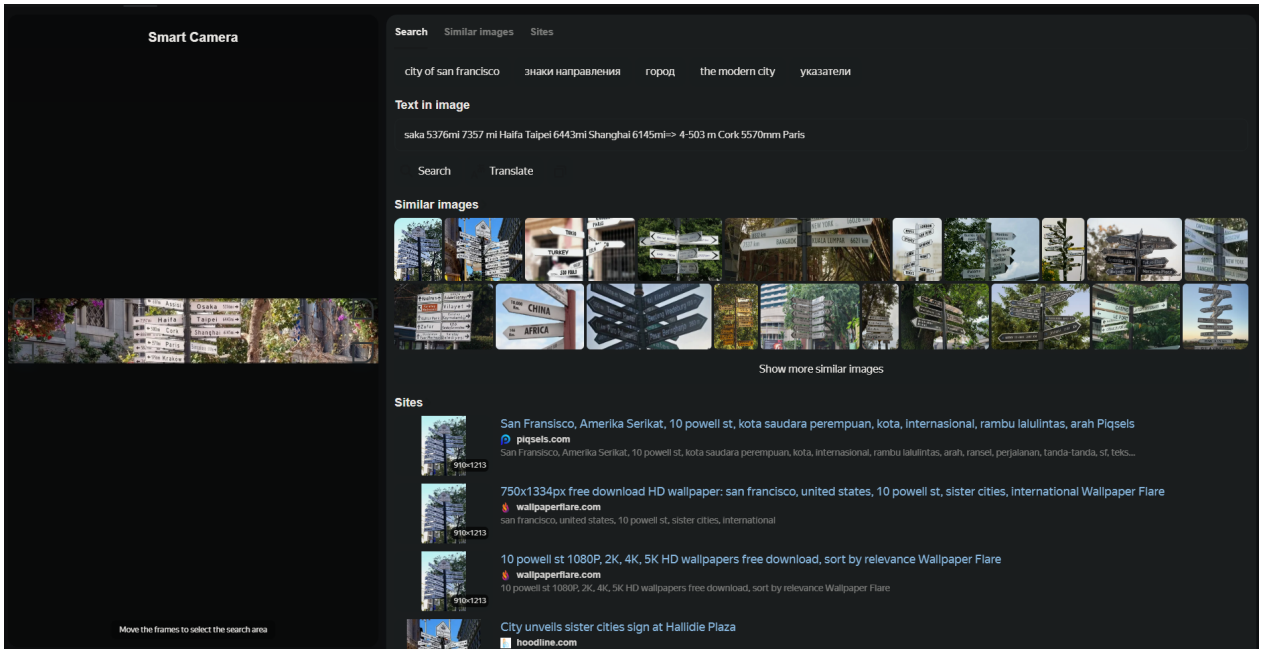

Figure 2: Reverse image search using Yandex

The search results quickly revealed the identity and location of the sign: the **San Francisco Sister Cities Sign**, located at Powell St & Market St, San Francisco, CA 94102, United States. From this, we extract the first nine characters required for the password: `sansister`.

The next step involves determining the relationship between the cities listed on the sign. A brief inspection of the surrounding area using Google Maps shows that the sign is adjacent to a cable car terminal, indicating a connection to San Francisco's iconic public transit. This leads us to the next keyword fragment: `cable`.

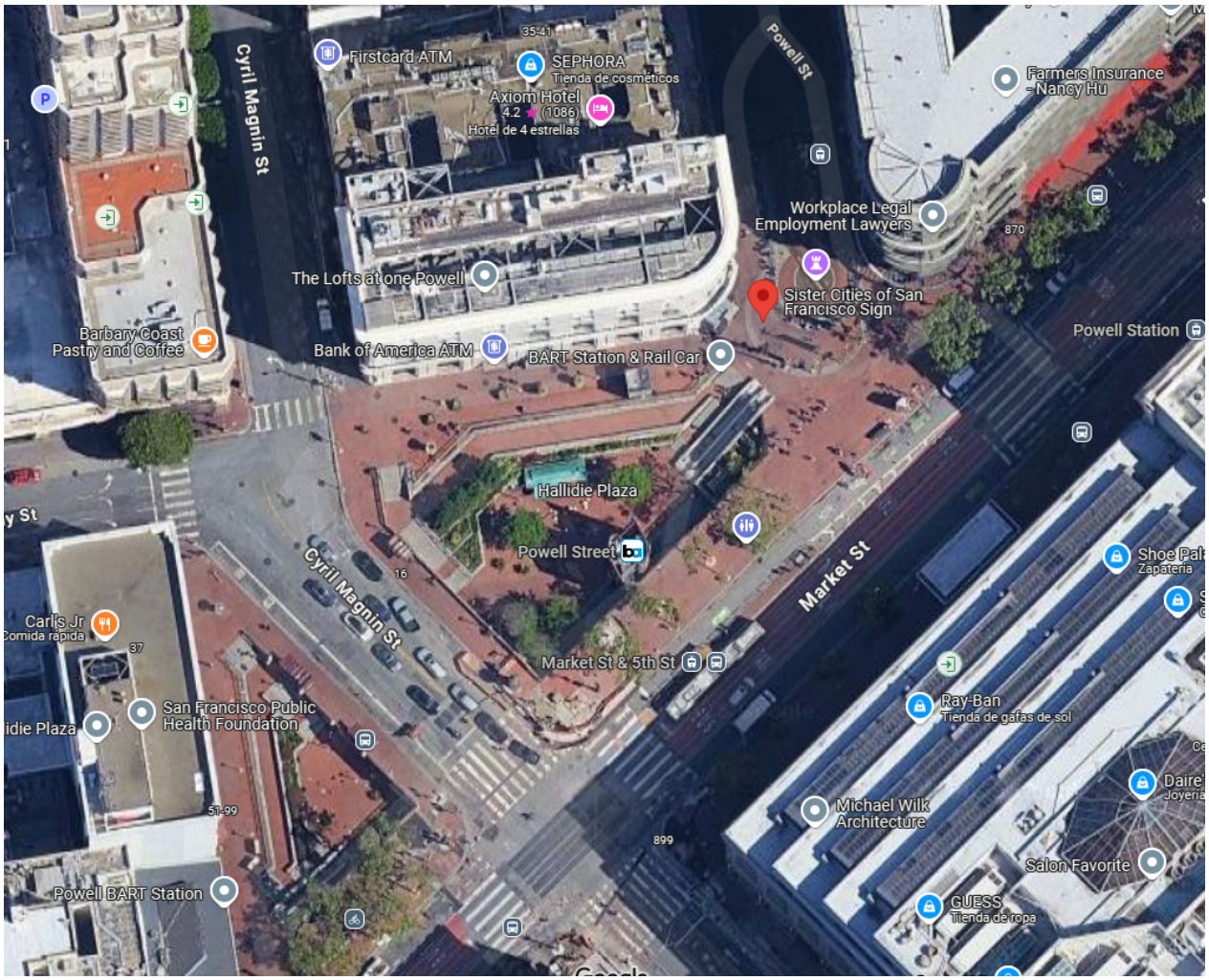

Figure 3: Google Maps view of the surrounding area

Lastly, we must estimate the approximate time the image was taken. Visually, the lighting and shadow angles are consistent with a time near midday. An attempt to extract EXIF metadata using `https://exif.tools/` did not yield any temporal information. Consequently, a brute-force approach was employed, testing values from 12:00 to 10:00. The correct result was achieved using "10", which appears to align with the visual characteristics of the scene.

Thus, the final password string is:

sansistercable10

Converting this string into an MD5 hash successfully unlocks the badge associated with the challenge:

Figure 4: Unlocked badge