CASE STUDY

UAS FLIGHT DATA:
DRONE DETECTION AT A DESTINATION HOTSPOT

AIRSIGHT
UAS & Drone Pilot Detection

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DRONE DETECTION AT A DESTINATION HOTSPOT

Industries are well aware of the issues and risks that drones pose on public safety. Few incidents made headlines like the one at Gatwick Airport, that incident prompted many security professionals to consider drone threats and deploy drone detection. Those companies and organizations that have implemented drone detection systems are logging issues daily.

In this case study, we are diving into the data collected from a drone detection system installed In a major U.S. city. Late December 2018, AirSight deployed AirGuard a software platform that integrates drone detection data from Aeroscope and ApolloShield with the capability of remote ID and ability to track various brand and models of drones in real-time through a single interface.

Aeroscrope RF Sensor

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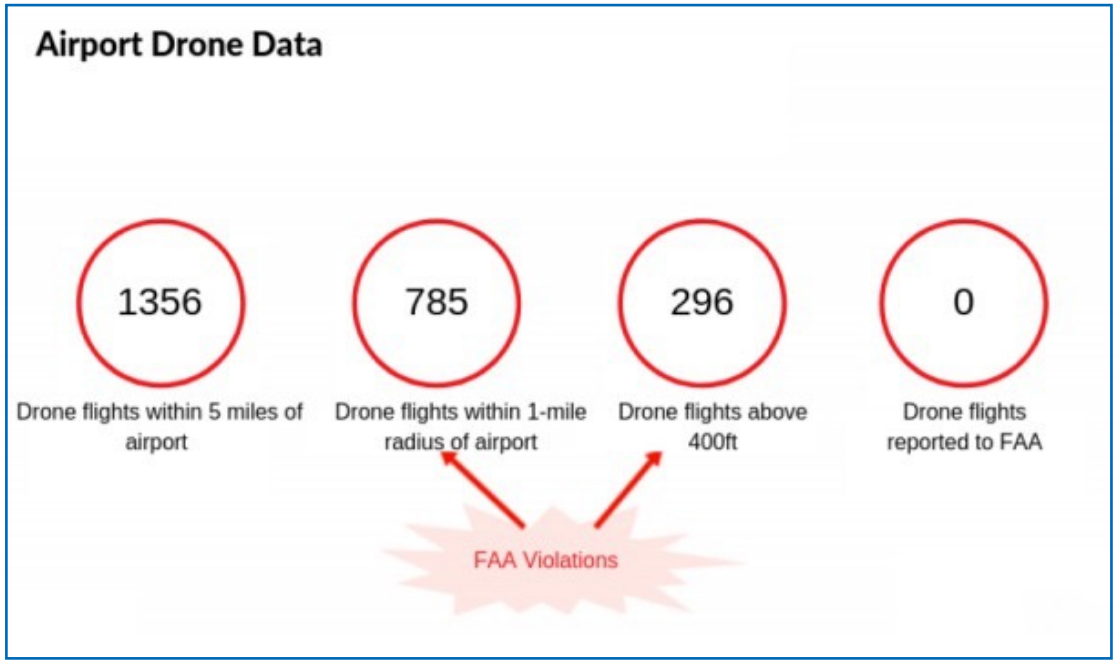
Once AirGuard was installed, our system tracked and recorded an average of 50 drones a day within a 2-mile Radius of the local airport.

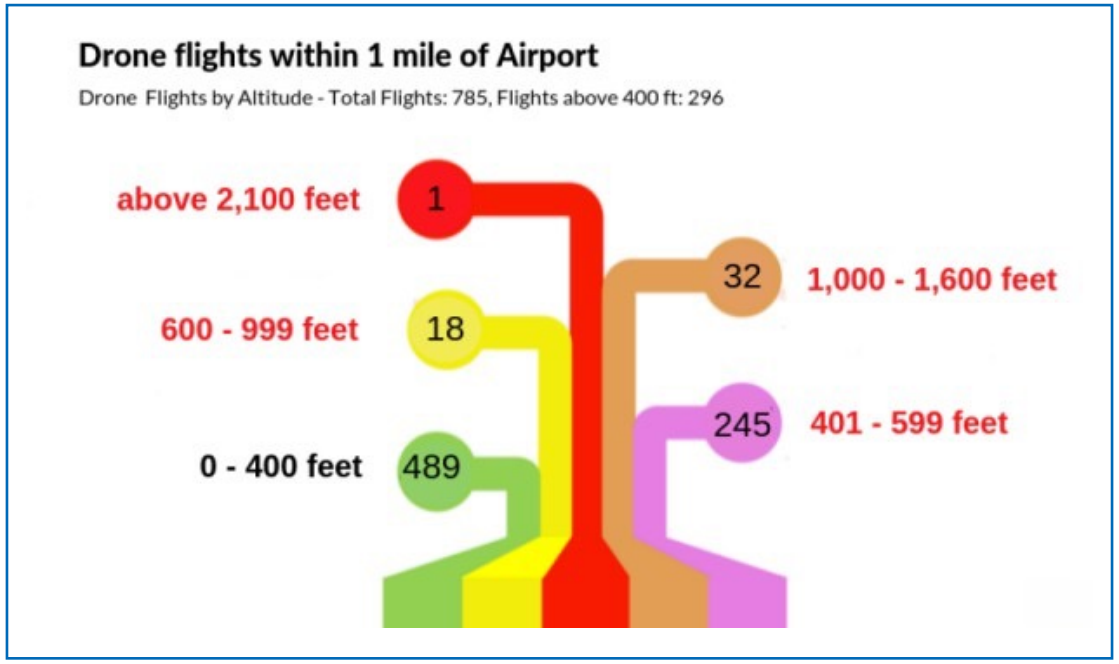
The city's popular "strip" is located approximately one nautical mile from the airport. Since the strip is inside the 5-mile "No Fly Zone," each of those flights violated federal regulations.

After collecting and recording the data, we layered the drone data over the airport coordinates in 2-mile and 5-mile radius circles which included airport flight landing paths.

DRONE DATA RESULTS

The results were shocking; **785** drones flew within one mile of the international airport in the four-week period. Upon analyzing the data further and looking at drone flight altitudes, we learned that nearly **300** drones flew over the allowed range of 400 ft and one drone flew over 2,100ft.





Our case study got more interesting when a YouTuber and drone pilot, going by the nickname Brandon ON, uploaded Youtube videos with footage of his drone flying over various famous landmarks such as: casinos, hotels, and HWY 10. The video, uploaded on January 28, 2019. was flagged by several casino property owners. These owners were aware of our system in their area and reached out to us for help.

AIRSIGHT PROVIDES CASINOS WITH DRONE DETECTION

Since the Remote ID is still in concept stage and of course we don't have access to the FAA drone registration database, we used our solution to capture the unique identifier number combined with some old school detective work to find the pilot.

Another challenge during the investigation is we didn't know exactly when the videos were taken. It would have been too time-consuming to check every flight and compare it to the drone from the video.
Instead, we mapped all drone flight take-off locations in the city. Afterwards, we compared those to the drone take-off location in the video.

Minutes after analyzing this data with Google Earth, we were able to identify the take-off position and the drone's unique identifier number.

Using the unique identifier from the pilot's drone, we were able to track all of the pilot's flights in the city and in the other cities where we have AirGuard deployed. The pilot was later identified, and information about the drone flight was shared with the FAA.

AirGuard - Airspace management solution for your environment AirGuard is a purpose-built Airspace Management and Drone Detection Platform for real-time visualization and litigation of drone risks and threats. AirGuard is fully compliant with the FAA and FCC.

AirGuard Integrates with electronic drone detection technologies like Radio Frequency (RF) sensors and high-resolution drone radars to detect drones and pilot locations providing security personnel with critical information like drone ID, make/model, payload capacity, and real-time GPS location for both the drone and pilot. AirGuard integrates data from multiple sources via APIs from systems such as ADB-S and existing security systems which allows security personnel to manage their airspace in one easy to use interface.