INTEROFFICE MEMORANDUM

TO: RESEARCH TEAM AT TRIPOD INC.
FROM: TURNER BARNETT
SUBJECT: BIRD STRIKE AVOIDANCE
DATE: DECEMBER 5, 2016
CC:

Hello, research team of Tripod Incorporation! My name is Turner Barnett, and I am an intern working as a data analyst within the company. I have been notified that there has been a serious issue with birds striking into aircrafts. In some severe cases like the emergency water landing of the US Airways Flight 1549 into the Hudson River, people's lives have been at risk. I am aware that your research team is constructing an ultrasonic device that will be used to prevent birds from getting close to aircrafts, and that you are using a prototype monitoring system with a limited range to monitor this device. As a data analyst, I have analyzed the data that was collected in California, Florida, and Texas starting from 2010 until now. Using the data, I pieced the information together, and began to notice a few different trends that may be of some use to your team when monitoring ultrasonic device.

After reviewing the information that was gathered from the research team, I noticed many tendencies that the birds seem to follow. Out of all the airports that I had information on, the airport with the most bird strikes was the Dallas/Fort Worth International Airport in Texas. This airport had 1841 incidents recorded in the data, while the next highest amount of incidents was at Orlando International in Florida, with 860 incidents. Using the information, I also discovered that most of the incidents occurred between June and August when the temperature is the highest over the year. Also, Texas was the state with the highest amount of bird strikes out of the three states recorded. After looking at the trends in time of the year and location, I decided to look at the average height, speed, and distance of the most common bird strikes. After taking the average height of all three states, it seems that most of the incidents occur at around 800 feet. The overall average incident speed was around 140 mph and the average distance from the airport was 1 mile away.

From the information that I examined, I can conclude that the best airport to test the ultrasonic device is at Dallas/Fort Worth International Airport in Texas. My reasoning for this is because Texas has the highest recorded incidents. I would say that the best circumstances to test this device would to be at the Dallas/Fort Worth International Airport in Texas during a summer day within one mile of the airport. Under these circumstances, I believe that the bird activity would be at its highest, which would help test and gather information to see how the birds react to the ultrasonic device. I hope this information helps in the success of your project!