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Data Science Capstone Proposal

Since 1990 wildlife collisions with aircraft have been increasing within the United States. From 1990 to 2015, over 150,000 incidents have occurred with wildlife and planes. 38% increase from 2009-2015. Multiple scenarios have occurred where wildlife collisions have wreaked havoc and caused travesty due to collisions with aircraft. The FAA will investigate where and when this situation occurs most and have asked me to provide models to help with where to station more emergency services to prevent injury to humans.

I have been asked by the FAA to look over the recent data provided about wildlife airstrikes, specifically birds. This project request entails me looking over which airports are most susceptible to bird strikes while on taxi, takeoff, and landing. This will allow me to provide them with the models needed to decide where more emergency services should be stationed in case of wildlife strike. Simply, which airport and flight status is most likely to see a bird strike? Along with Where do emergency services need to be increased?

In order to achieve this goal I will address multiple steps. I plan to join data from the FAA that provides me with the airport and flight situation in which the incident happened. I will also provide graphs showing which airport in general is at most risk to this situation. I will also join data providing the amount of flights each year out of each airport. This will help establish a rate of which the wildlife strikes happen (smaller airports will equal, less flights will equal less bird strikes).

Another task would be to break down when the strike happens. Using data from the FAA I will provide the statistical chances that strikes happen either during the phase of taking off, landing, and on taxi. Providing these data sets with conclusion will answer the questions of which airports need the most emergency services and in which situation emergency services will need to be engaged.

All reports will be made to the FAA director which will then be communicating within advisors of the White House. This will then be made into a decision. I will be in direct communication with the FAA director leading him through all steps that lead me to my conclusion. I will be gathering data from both Aircraft Wildlife Strikes, 1990-2015 | Kaggle, along with FAA Wildlife Strike Database.