**Project 1: Exploratory Visualization**

The initial questions are: What is the the total number of small plane accidents in the United States? What is the severity of aviation injuries? What two causes combined contribute the most to accidents? What type of plane (make, model) has sustained more accidents? When are the accidents occurring: takeoff, climb, cruise, maneuvering or landing? Has the safety improved over time?

The goal of asking multiple questions at the start and looking at the data from multiple perspectives is that it will lead to uncovering trends, patterns and relationships in the data that would not be otherwise evident.

**PROSPECTUS**  
  
Travelling by air is the fastest means to get from point A to point B. Flight is also a passion for many who are willing to accept the inherent risks. This visualization will explore general aviation injuries that occurred over six decades in the United States. Specifically, I am looking at the accidents and incidents by make and model of the plane to see if there is a connection between aircraft manufacturers and injury accidents to help determine safety performance and trends. The severity of injury will be rated by “Fatal” and “Non-Fatal”. Additionally, I will look at the weather impact and the time in flight when the accident occurred. Lastly, if possible, I will attempt to identify the two causes when combined lead to most fatal accidents.

**Data Source**

My data source is Kaggle.com: AviationData.csv. This is a dataset from the Federal Aviation Administration (FAA) Aviation Accident/Incident Database providing details about each aviation accident that has occurred from 1962 to the present.

**Plan**

* Download and explore data.
* Prepare data: remove helicopter, public aircraft and commercial aircraft data, fix broken values, determine if a subset of data must be used.
* Determine the best suited visualizations for the data.
* Break down the tasks and implement them.

**Sketches & Mockups**

A picture containing drawing

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*A picture containing outdoor, transport, plane, aircraft

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**Audience**  
*General aviation, small aircraft pilots.*

**Sources**  
*Kaggle.com*

*FAA.gov* <https://www.faa.gov/news/fact_sheets/news_story.cfm?newsId=21274> *AOPA:* <http://www.aopa.org/training-and-safety/air-safety-institute/accident-analysis/joseph-t-nall-report>

AOPA Air Safety Institute: 20162017AccidentScorecard.pdf

Plane Crash Info: <http://www.planecrashinfo.com/cause.htm>