I made a data query to the [Arizona Maricopa County Animal Control](https://www.maricopa.gov/5268/Animal-Care-and-Control) for raw data to be used for this project. I was given a [data set of incident reports of animal bites, injuries, ect](https://publicrecordsrequest.maricopa.gov/nonCommercial?d=15). in the county. Using information from articles [World Health Org on Animal bites](https://www.who.int/news-room/fact-sheets/detail/animal-bites), [9 Myths about Dog Aggression](https://iheartdogs.com/9-myths-about-dog-aggression/) and [Animal Bite: Symptoms, Diagnosis and Treatment](https://www.healthline.com/health/animal-bites) for guiding my testing. I have uploaded the .csv file provided to Google Drive as a shareable link to access in Python.

Research is geared to give insights to the number of injuries due to Animal interactions to be able to give guidance to first responders and Maricopa Animal Control.

This report would be beneficial to persons in law enforcement, emergency medical fields and the Maricopa Animal Control personnel. To help understand correlations between animal related injuries to humans.

* Are we encouraging people enough to seek professional medical care and self-care choices?
* Are animal related injuries more common in the Morning and Afternoon?
* Are children more vulnerable than adults in regards to animal related injuries?
* Are injuries with job related activities more common than others?

My cleaned up data has 32 Columns and 5435 rows of 2018 incident records. Data consists of integers, strings and boolean fields after data review.

* Dataset for Project [.CSV](https://drive.google.com/file/d/13NgzaBzEATDf2JpL4GgTc2Hit1lVJq_9/view?usp=sharing)  [.EXLS](https://drive.google.com/file/d/1tlMnQilIBq_78zwCg52lmLBD5UokDoNS/view?usp=sharing)
* [Colab Workbook for project](https://colab.research.google.com/drive/1Ibmgvu-tZvlucTi_WUxgveMBAJz4oJSC#scrollTo=Afq9CkXB2gBI)

## The data set is workable for the research questions to answer and the tests to run:

* Is there a statistical significance between medical care and self-care choices?
* Is there a statistical significance between Morning and Afternoon related injuries?
* Is there a correlation between animal related injuries due to the age of a human and severity?
* Is there a correlation between animal related injuries with job related activities?

Back up test questions.

* + Is there a correlation between animal related injuries and human relationship to the animal?
  + Is there a correlation between Civil and Criminal related injuries in the city or county boundaries?
  + Is there a statistical significance between animal and human related injuries?
  + Is there a statistical significance between Repeat animal offenders and one time instance?

## Proposed hypothesis tests

1. Reject the null that there is no difference between the population means of medical care and self-care choices after animal related injuries.
2. Reject the null that there is no difference between the population means of Morning and Afternoon related injuries?
3. Reject the null that there is no correlation of the population means of animal related injuries with job related activities?
4. Reject the null that there is no correlation of the population means of between animal related injuries due to the age of a human and severity?

## Continuous numeric data to test their hypotheses

* Age field (Column M)
* Injury Severity ranking (Column S)
* Treatment Type ranking (Column V)