

# 383: Project Proposal

## Project Proposal

We will use the datasets to examine the correlation between dog size (weight and height) to dog intelligence. Intelligence for a dog is defined as the dog's obedience (the probability of the breed to obey on the first command) and the number of repetitions needed for learning new commands (lower is better).

Dog's have been bred for many different purposes, and although a dog breed may not be considered 'intelligent' in this context, that does not make them less smarter than those that score well here. Some dog breeds were bred to not require obeying a human and relied more on independent thinking to do their purpose.

## Team

Enter the email addresses of the team members:

- 1) nrahbany@csumb.edu
- 2) ashiraki@csumb.edu
- 3) jshinozuka@csumb.edu
- 4) kemcnulty@csumb.edu

## Project Idea

One of the ongoing debates among dog lovers and owners is whether or not there's a relationship between a dog's size and intelligence. While some people consider that larger dogs tend to be smarter, others argue that intellect does not depend on size.

By studying a dataset of different dog breeds and their characteristics such as size and intelligence, this project seeks to identify any correlation between canine physical attributes such as size or weight and their perceived level of intelligence (measured in obedience).

Our initial data collection consists of two datasets which provide physical dimensions and intellectual levels of various canine breeds.

We plan to examine data relations such as height to weight ratio in order to identify less obvious correlations between physical attributes and intelligence that may exist within the data sets. Collecting additional data to form subclasses ie: Herding breeds or working dogs may provide an added layer of granularity.

## Dataset

<https://www.kaggle.com/datasets/thedevastator/canine-intelligence-and-size?select=AKC+Breeds+Info.csv>

#### AKC Breed Info.csv

This dataset has 5 data columns (Breed, height\_low\_inches, height\_high\_inches, weight\_low\_lbs, weight\_high\_lbs) that provides information about dog breeds size in height and weight. There are a total of 149 rows, which is more than the other dataset.

149 rows

#### Dog\_intelligence.csv

This dataset has 5 data columns (Breed, Classification, obey, reps\_lower, reps\_upper) that need to be examined closer to see if they are all providing the information we need for this project. There are a total of 135 rows, which is less breeds than the other dataset.

There is the possibility of adding a column for AKC Group designation to also examine its correlation to dog's obedience and intelligence.

These datasets can possibly be merged on dog breeds, after getting a better understanding of the datasets, to use for the project. The website linked above has some analysis of the datasets that need to be explored.