Is there any correlation between a dog's breed and certain behavioral traits, according to the values provided by the C-BARQ (Canine Behavioral Assessment and Research Questionnaire) at https://figshare.com/articles/dataset/C_BARQ_survey_on_dog_behavior_and_temperament/715896? Further, do these confirm or deny certain breed stereotypes?

Through this capstone project, I would like to assess whether a dog's breed consistently correlates with certain character traits, including herding, aggression, separation anxiety, and more, by comparing the values provided by the C-BARQ dataset by breed.

There is a constant societal debate over which dog breeds are more friendly, more dangerous, more independent, more active, and dozens of other traits. Laws have been enacted prohibiting certain breeds on the premise of supposed unprovoked aggression, but is this a valid assertion? Should ownership of certain breeds be regulated? Is there any validity behind breed stereotypes? Knowing whether an animal's breed can affect its behavior is valuable information for all dog owners, and can help people tailor their care for their pets.

For this project, I will be using a dataset provided freely by the C-BARQ assessment, which includes data for about 12,000 dogs and 15 observations of each. The dataset is almost entirely numerical and continuous in nature, excepting the 'breed' field, which is used mostly for identification and indexing of the set.

After cleaning and preparing the data, I will first examine variability within breeds. Do some breeds have more consistent behavioral scores than others? Then, I will average trait values per breed (taking note of those breeds which are particularly variable) and compare each trait to determine which breed exhibits it the most.

The target variable for a prediction model will be 'trainability,' being as this can best educate dog owners on their pets.

This project will deliver a GitHub repo containing work from each step, as well as a slide deck and a project report.