**CSC3060 AIDA – Assignment 3**

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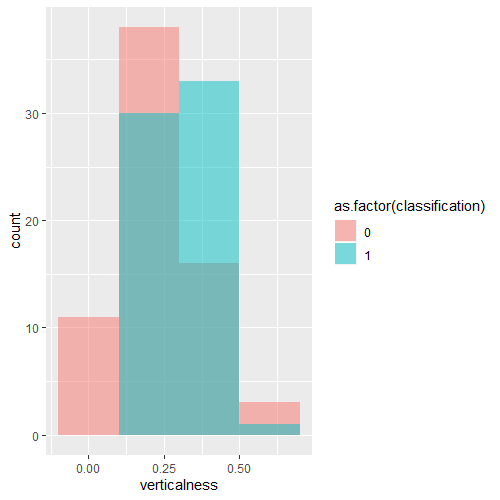
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# Introduction

# Section 1

## Section 1.1 – Logistic Regression using the Verticalness feature

Upon loading the feature data into the script, I discovered that for the purpose of this task, I needed to classify each of the observations as either “living” or “non-living”. So, I wrote a function that iterated through each observation, evaluating the value of the ‘label’ column. If the value of the label was one of the living things (banana, cherry, flower, pear) then the classification for that observation would be 1. Likewise, for those observations which had labels belonging to non-living things (envelope, golfclub, pencil, wineglass), the classification would be 0. These classifications were made under the assumption that living things were represented by a value of 1 and non-living things by a value of 0.

With all 160 observations classified as living or non-living, I was able to start building the model. I shuffled a sample of the original dataset and assigned the first 80% to the training dataset and the remaining 20% to the test dataset. The histogram for the ‘verticalness’ feature shows a significant overlap for both classifications between the values X and Y (roughly). From a simple assessment of these results one might already be able to suggest that the ‘verticalness’ feature is not a good predictor of whether a doodle belongs to either the living or non-living category.

The results of the model show significant p values (p < 0.01) for both the Intercept and the verticalness coefficients.

A screen shot of a social media post

Description automatically generatedThe model was built with the training dataset and the results were close to what I had expected. The model can never truly classify an

## Section 1.2 – Building a classifier using the model from 1.1

## Section 1.3

## Section 1.4

## Section 1.5

# Section 2

## Section 2.1

## Section 2.2

## Section 2.3

# Section 3

## Section 3.1

## Section 3.2

## Section 3.3

## Section 3.4

# Conclusions