**Title, Abstract, Keywords, Introduction (12%)**

Provide a brief introduction to the project. Precisely define the problem you are solving, i.e., formally specify the inputs and outputs. Frame the problem as a machine learning task. Explain why this task is interesting and important.

[**https://www.sciencedirect.com/science/article/abs/pii/S0092656602005342?via%3Dihub**](https://www.sciencedirect.com/science/article/abs/pii/S0092656602005342?via%3Dihub)**[1]**

**frontiersin.org/articles/10.3389/fpsyg.2018.00199/full [2][3]**

**https://www.tandfonline.com/doi/abs/10.1080/00223989809599166**

Millicent H. Abel (1998) Interaction of Humor and Gender in Moderating Relationships Between Stress and Outcomes, The Journal of Psychology, 132:3, 267-276, DOI: [10.1080/00223989809599166](https://doi.org/10.1080/00223989809599166) [4]

https://www.jstor.org/stable/40604364[5]

Males scored higher than females on Aggressive and Self-defeating humor. It is expected that the HSQ will be useful for research on humor and psychological well-being by assessing forms of humor that may be deleterious to health as well as those that are beneficial.

Interest in the study of humor-related traits is likely to continue, in view of current attention to the concept of “positive psychology” (Seligman & Csikszentmihalyi, 2000; Snyder & McCullough, 2000), which focuses on such adaptive strengths as optimism, faith, and courage, as well as humor.

Predicting Participants’ Gender Based on Age and HSQ Test Result Using Machine Learning

Abstract: This project focuses on predicting participants’ gender using their four-scale scores calculated from the humour style questionnaire, accuracy as well as using their age. The four scales scores are affiliative, self-enhancing, self-defeating and aggressive respectively. This problem is a classification task using supervised learning. Three typical algorithms for multiclass classification will be used to predict the results. They are Random Forest, k-Nearest Neighbours and Decision Trees.

Keywords: Machine Learning, Prediction, Gender, Humour, Psychology

Introduction:

Scientific research from the last two decades has shown how the use of humour is impacting on our physical as well as psychological wellbeing. Thus, studying humour can be beneficial in understanding personality as well as treating psychological disorders, since interest in the study of humour related traits is likely to continue.

We will focus on the gender difference of using humour. From research conducted by Martin et al., it is shown that males genuinely score higher on self-defeating and aggressive humour [1]. Nevertheless, men are perceived as the embodiment of an ideal sense of humour. [2]

It is worth noting that age is another factor which could affect the four scale scores. For example, as people grow older, they might prefer caring or wise humour over hostile humour; cited from study conducted by Tosun et al. [3]

In this machine learning project, the aim is to predict the participant’s gender given their four scale scores and their age. It is helpful to investigate the correlation between these factors and offer good insight to gender difference in humour styles.

Related Work:

There are previous psychological studies that suggest there are gender differences in the use of humour and how they are affecting individuals. For example, coping with stress. [4]

Another example study has shown that an interaction between humour use and manager gender was hypothesised where male managers were advantaged in rating relative to females. [5]

These studies support the importance of analysing gender in the use of humour.