

# Mini Project

Personality Prediction

## USING SOCIAL MEDIA IMAGES

Under the guidance of  
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# INTRODUCTION

- Deep learning is a powerful tool for predicting a person's personality from their social media images. By applying deep learning algorithms to images, we can gain insights into a person's traits and characteristics.
- The aim of this research is to identify the user's personalities by selecting profile images based on big five personality traits and to create a system to determine the user personality through a personality test. Five forms of personality are evaluated by the social media profile picture of the individual.

# PERSONALITY RECOGNITION

Big-Five model is used in identifying an individual's personality

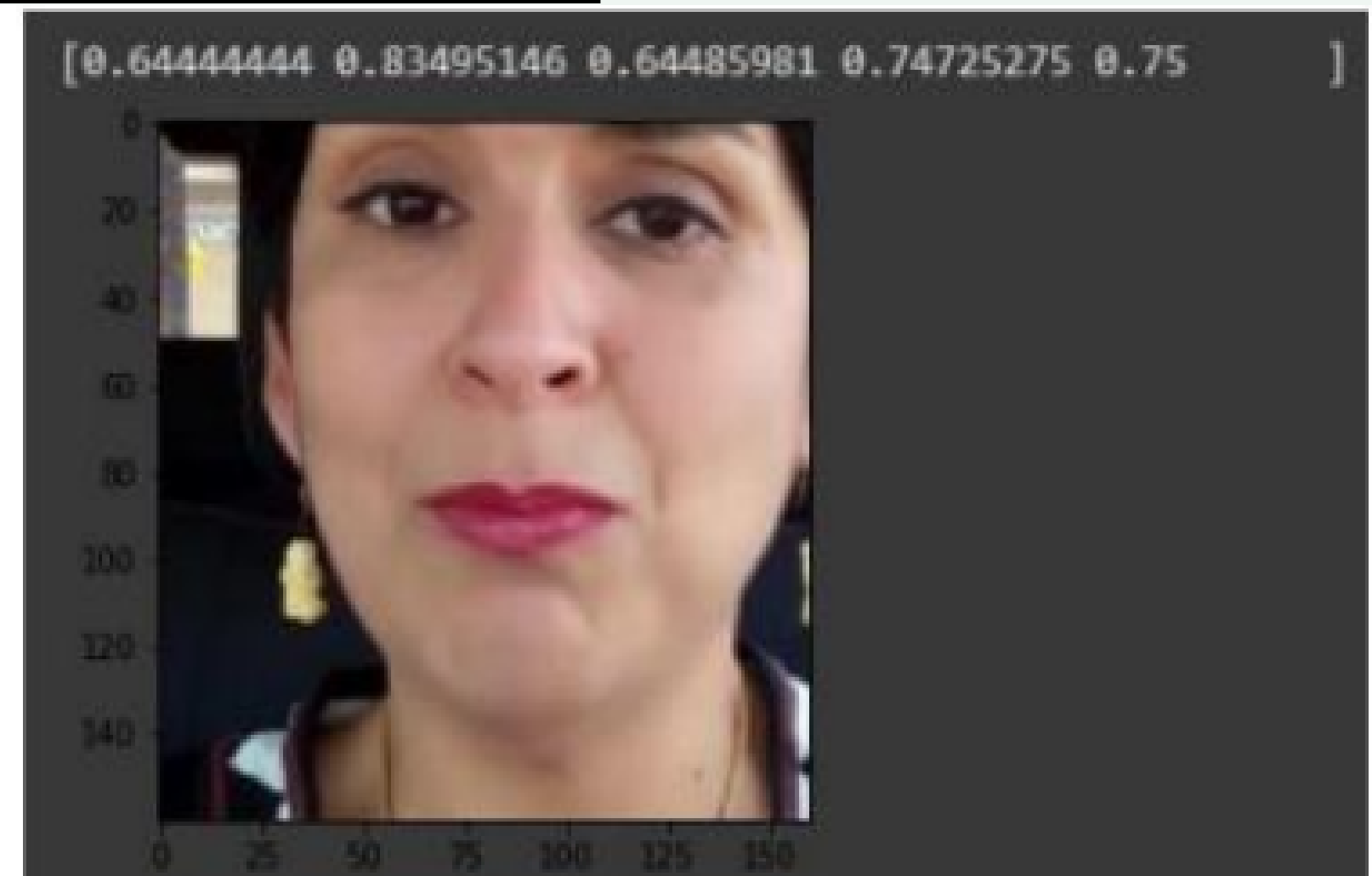
- This model consists of five characteristics, called “OCEAN”: Openness, Conscientiousness, Extraversion, Neuroticism and Agreeableness.
- In this study, the broad five-factor model is chosen to measure personality traits that classify users' personality into five agents: Openness to Experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism. Highly extraverted individuals are warm and self-assured than calm and wary.

# DATASET

- The dataset used in this analysis contains 5000 images of social media user posts from the open-source [IEEE-dataport.org](https://www.ieee-dataport.org/). Approximately 10,100 users posted images with personality labels based on a model of the Big Five Personality Traits.
- This includes the Five personality scores given between 0 and 1 for each user.
- It has five columns, the first column represents the value for Extraversion, the second column represents Agreeableness, the third column represents Conscientiousness, the fourth column represents Neuroticism and the fifth column represents Openness.
- This table includes ten images personality score with each personality traits.

**Table 1** Distribution of dataset based on personality type

<b>E</b>	<b>A</b>	<b>C</b>	<b>N</b>	<b>O</b>
0.395	0.336	0.5	0.699	0.560
0.604	0.383	0.455	0.543	0.428
0.644	0.834	0.644	0.747	0.75
0.479	0.401	0.433	0.747	0.626
0.593	0.644	0.777	0.524	0.615
0.833	0.682	0.688	0.699	0.747
0.656	0.588	0.666	0.601	0.659
0.468	0.457	0.311	0.660	0.494
0.239	0.158	0.155	0.339	0.241
0.614	0.383	0.666	0.514	0.494





# METHODOLOGY

- We made use of pictures that people uploaded on social media. In particular, for profile pictures selected by users, for profile pictures with exactly one face.
- Features are retrieved from the photos using color, the type of image, and the pixels. The size of each image is the same.
- This method makes use of four regression analyses, and RMSE can be used to assess how well each personality attribute is predicted.

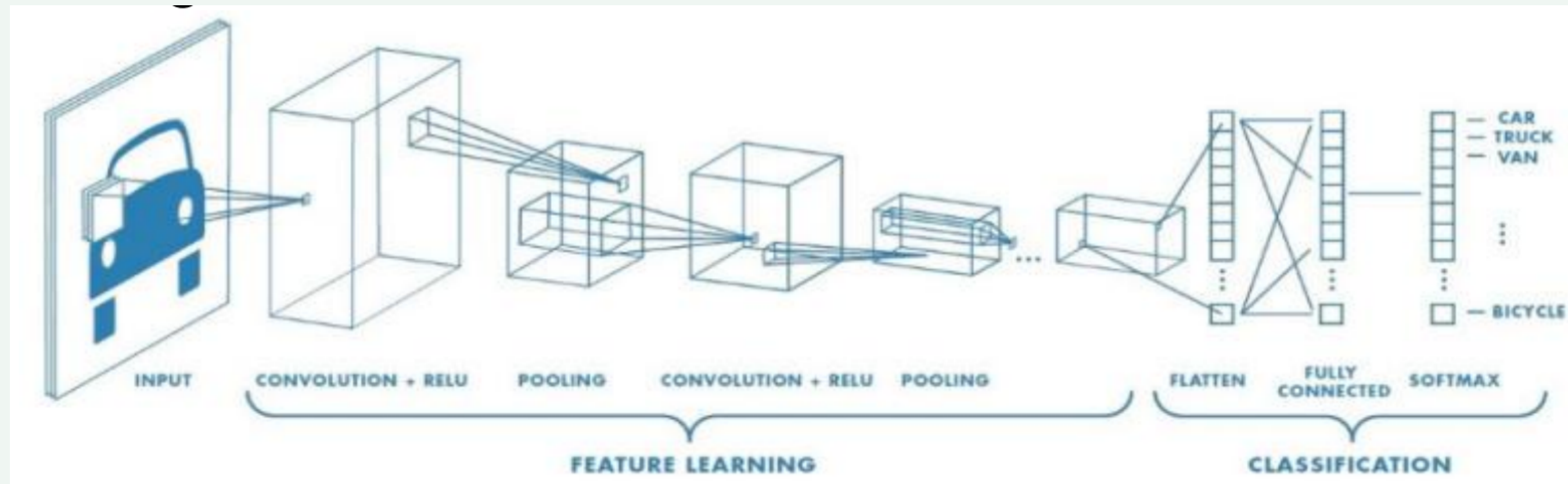
# PREDICTION RECOGNITION TECHNIQUES

- The Deep Learning

The Multimodal prediction system consists mainly of deep learning models like :

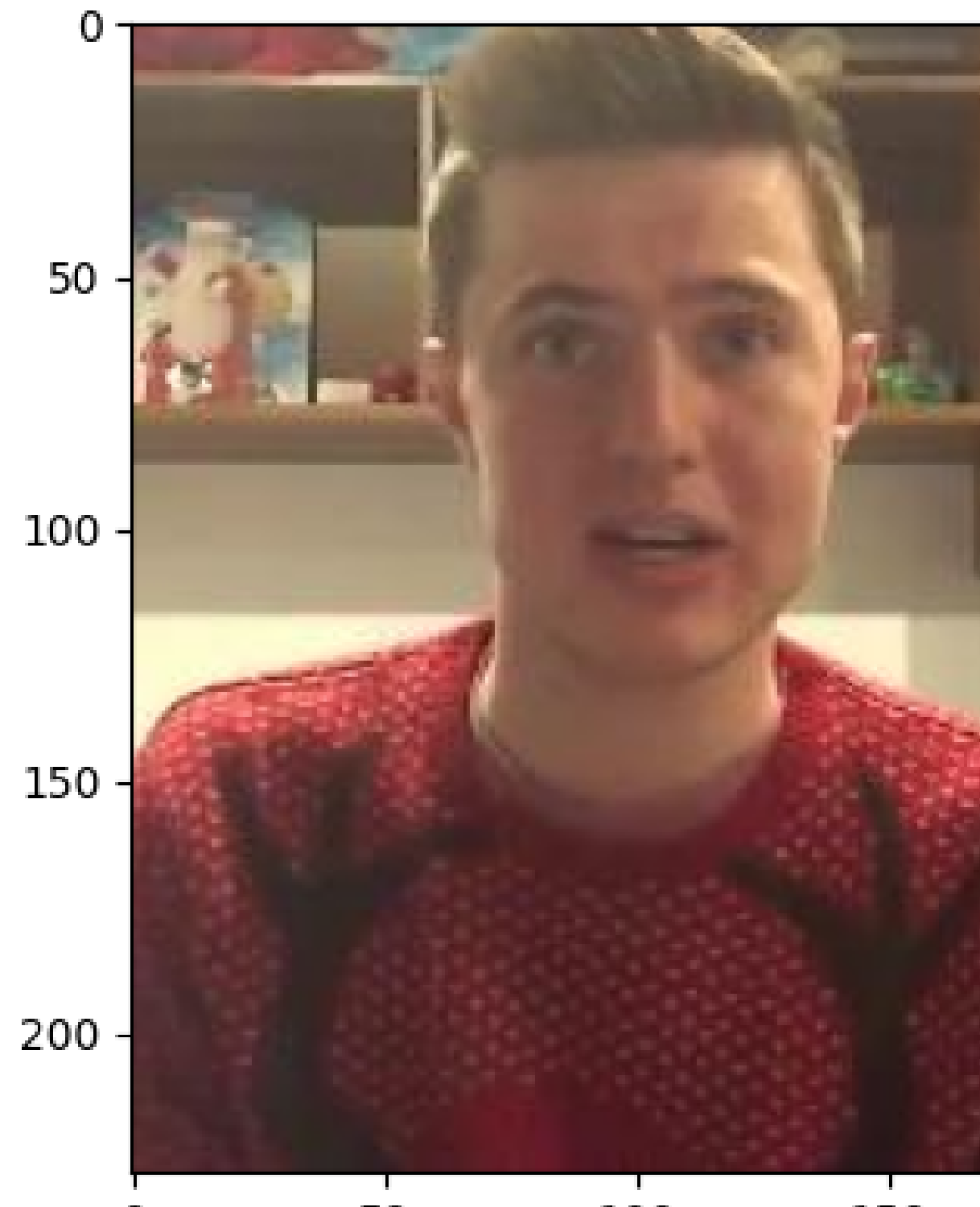
- Artificial Neural Network
- CNN
- RNN

They work under a single model and help us to find the personality of the person using his social media images.



# Our Model Prediction

```
✓ [37] print(v)  
17s  
1/1 [=====] - 0s 81ms/step  
1/1 [=====] - 0s 111ms/step  
{'ValueExtraversion': 0.14752111, 'ValueAgreeableness': 0.25192404, 'ValueConscientiousness': 0.17707768,
```





# CONCLUSION

- Performance of the Deep Learning model gives as a least root-mean square error (RMSE) over all the model
- Deep Learning model among the four regressor techniques provides (Loss: 2.1818) more accuracy for each distinct attribute The chosen set of features that cause variations in regressor performance are shown in the results. Furthermore, extraversion is the clearest (RMSE: 0.71).
- After doing 40 Epochs we get 55% accuracy and loss=2.1818 which is good for the Multi Model.

THANK  
YOU

