AIML TRAINING REPORT
B.Tech. III Year

Department of Computer Science & Information Technology

Name of the Student : Nidhi Mehta

Branch & section : CSIT-CI

Roll No. : 0827CI191039

Year : 2019-23

Department of Computer Science & Information Technology
AITR, Indore

ACROPOLIS INSTITUTE OF TECHNOLOGY & RESEARCH, INDORE

Department of Computer Science & Information Technology

Certificate

Certified that training work entitled " Industrial Training On AIML " is a bonafied work carried out after sixth semester by " *Nidhi Mehta* " In partial fulfilment for the award of the degree of Bachelor of Technology in Computer Science and Information Technology from Prof. Vandana Kate Acropolis Institute of Technology and Research during the academic year 2022-23.

Prof. Vandana Kate
Associate Professor

ACKNOWLEDGEMENT

I would like to acknowledge the contributions of the following people without whose help and guidance this report would not have been completed. I acknowledge the counsel and support of our training coordinator, Prof. Vandana Kate, Associate Professor, CSIT Department, with respect and gratitude, whose expertise, guidance, support, encouragement, and enthusiasm has made this report possible. Their feedback vastly improved the quality of this report and provided an enthralling experience. I am indeed proud and fortunate to be supported by him/her. I am also thankful to Dr. Shilpa Bhalerao, H.O.D of Computer Science Information Technology Department, for her constant encouragement, valuable suggestions and moral support and blessings. Although it is not possible to name individually, I shall ever remain indebted to the faculty members of CSIT Department, for their persistent support and cooperation extended during this work.

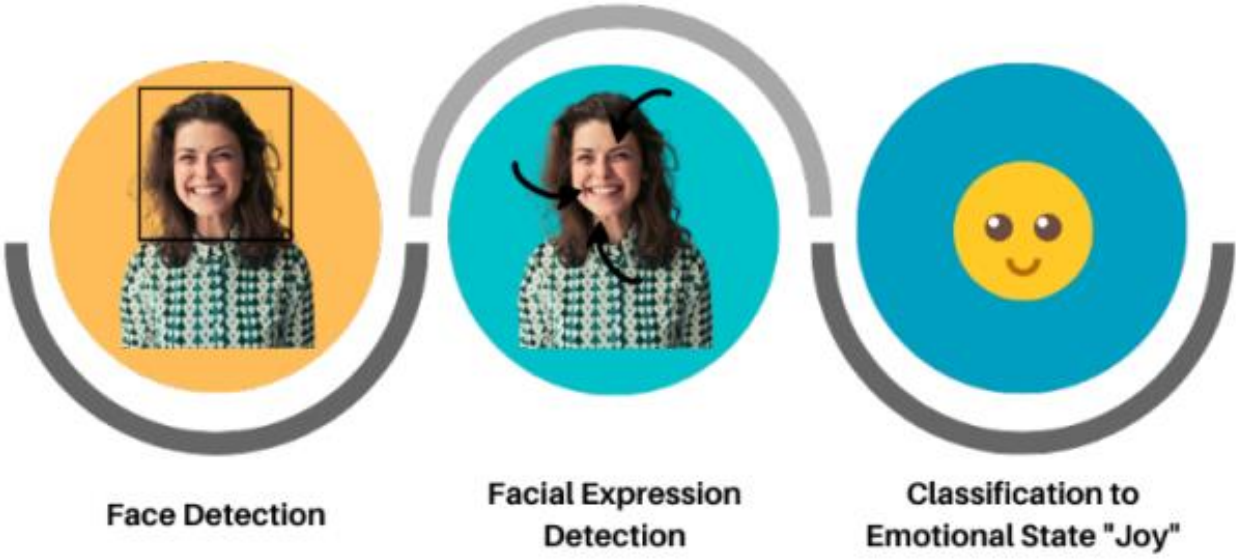
Student Name : Nidhi Mehta

Student Enrollment No. : 0827CI191039

INDEX

Introduction to Problem/Project Undertaken

Facial Emotion Recognition is a technology used for analyzing sentiments by different sources, such as pictures and videos.
FER analysis comprises three steps:
i) face detection
ii) facial expression detection
iii) expression classification to an emotional state



Objectives

Potential uses of FER cover a wide range of applications-
i) Provision of personalized services
ii) Customer behavior analysis and advertising
iii) Healthcare
iv) Employment
v) Education
vi) Public safety
vii) Crime detection

Machine Learning Models Used

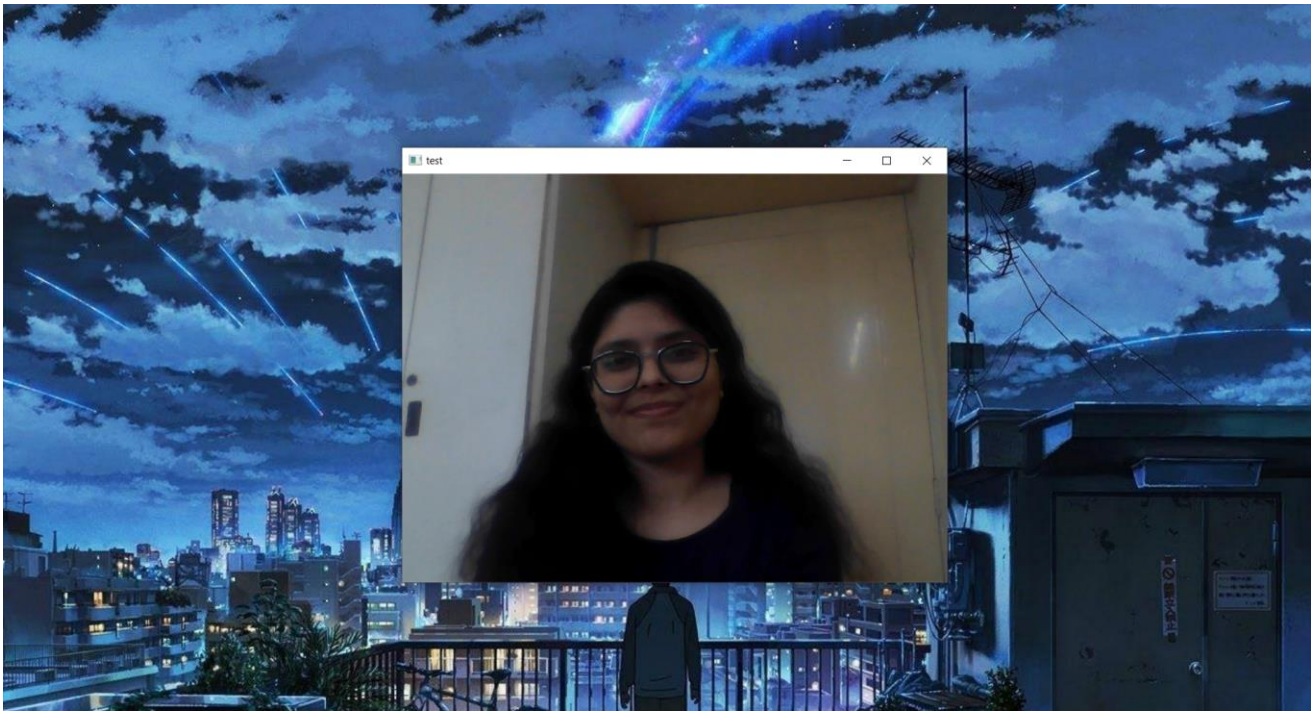
1. Automated starting webcam and capturing image (Using cv2)
2. Processing of captured image in the backend (Using matplotlib and haarcascade)
   i) Plotting according to the size of image
   ii) Converting the captured image from BGR to RGB
   iii) Identify and extract the face from the image and mark
3. Analyzing dominant emotion from facial expressions (Using deepface)

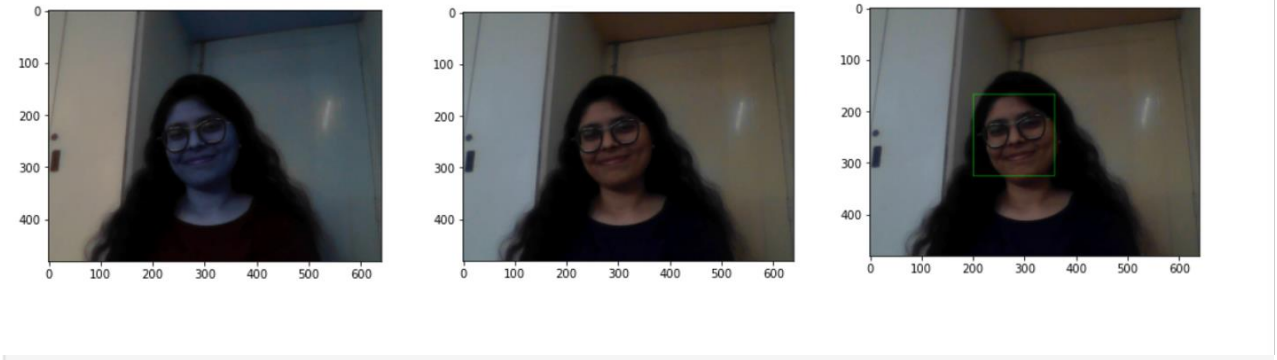
Fig. 1. Seven basic human emotions

Coding/IPYNB Notebooks

https://github.com/nidmehta/Summer-Training-2022/blob/main/Project/Emotion%20Recognition.ipynb

Screenshots of Model Deployment





```
You seem to be mostly happy
```

Kaggle Account /GitHub Links (showing your contribution and work)

https://github.com/nidmehta/Summer-Training-2022/tree/main/Project

Conclusion

References/ Bibliography

[1]https://towardsdatascience.com/the-ultimate-guide-to-emotion-recognition-from-facial-expressions-using-python-64e58d4324ff
[2] https://www.irjet.net/archives/V7/i5/IRJET-V7I51409.pdf