e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:05/Issue:10/October-2023 Impact Factor- 7.868 www.irjmets.com

FLOWER BREED IDENTIFICATION

Aditya Sharma[*1], Amit Kumar Yadav[*2], Aryan Tapkire[*3], Devesh Sharma[*4]

[*1,2,3,4]Computer Science Engineering, Acropolis Institute Of Technology and Research, Indore, Madhya Pradesh, India.

ABSTRACT

Well, for starters, flower species identification plays a crucial role in various industries, from agriculture to ecology and conservation. It helps us understand the flower kingdom better, which in turn can lead to the development of new medicines, more efficient farming practices, and even the preservation of endangered species of flowers.

Keywords: Analysis, Identification, Image Recognition, Tensorflow.

I. INTRODUCTION

Flower species identification plays a crucial role in various industries, such as agriculture, pharmaceuticals, and ecology. Accurate identification of flower species helps in improving crop yields, developing new medicines, and understanding the ecological balance of an ecosystem.

For instance, in agriculture, identifying the right flower species can help farmers optimize their crop management practices, leading to higher yields and reduced costs. In the pharmaceutical industry, accurate identification of flower species can lead to the discovery of new medicines and treatments for various diseases.

II. METHODOLOGY

- Start
- Choose and extract a dataset
- Split images for training and testing
- Pre-processing images
- Train CNN models
- Validate against testing dataset
- If less accuracy, modify split ratio
- Inherit the model to web app
- End

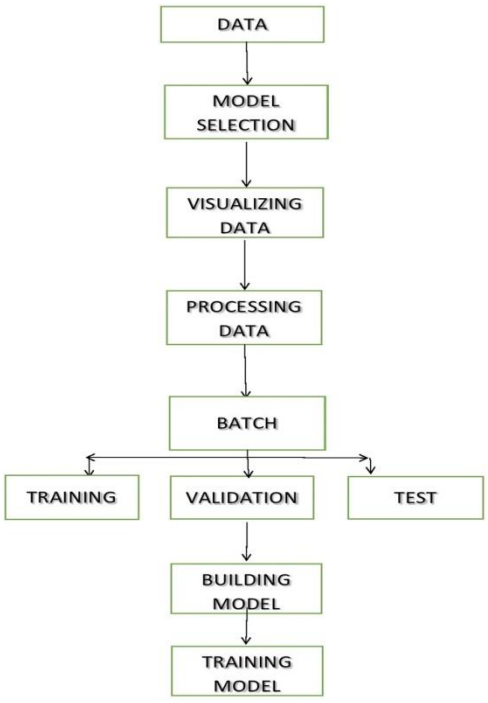

Figure 1: Process Flow Diagram

e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:05/Issue:10/October-2023 Impact Factor- 7.868 www.irjmets.com

III. MODELING AND ANALYSIS

Hardware Requirement Analysis

Developer's:

Hardware Processor > 2 Ghz

User's:

Secure local area network and internet connectivity

Software Requirement Analysis

Developer's:

VS Code and Python IDE

Flower Breed Dataset

Windows 10 or above

User's:

Google Chrome, Firefox, or Internet Explorer

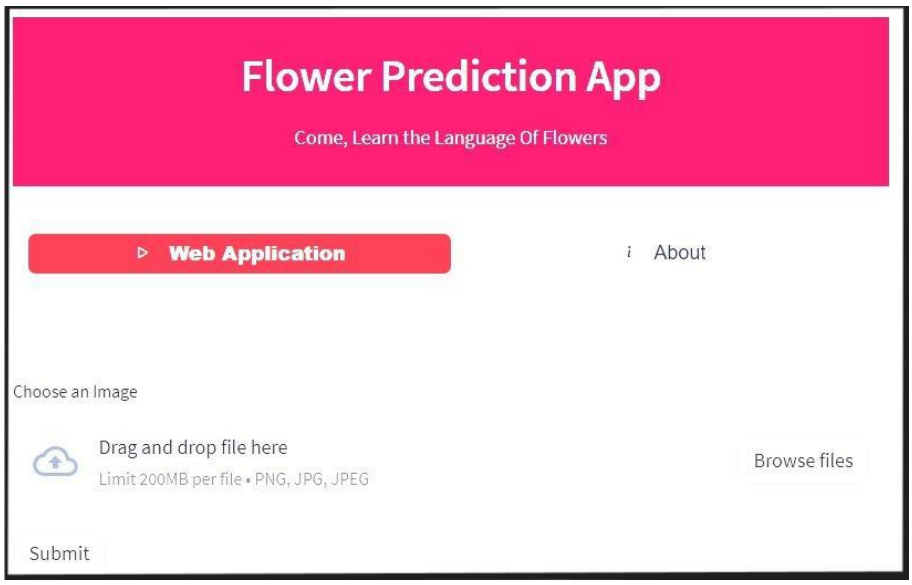

Figure 2: User Interface

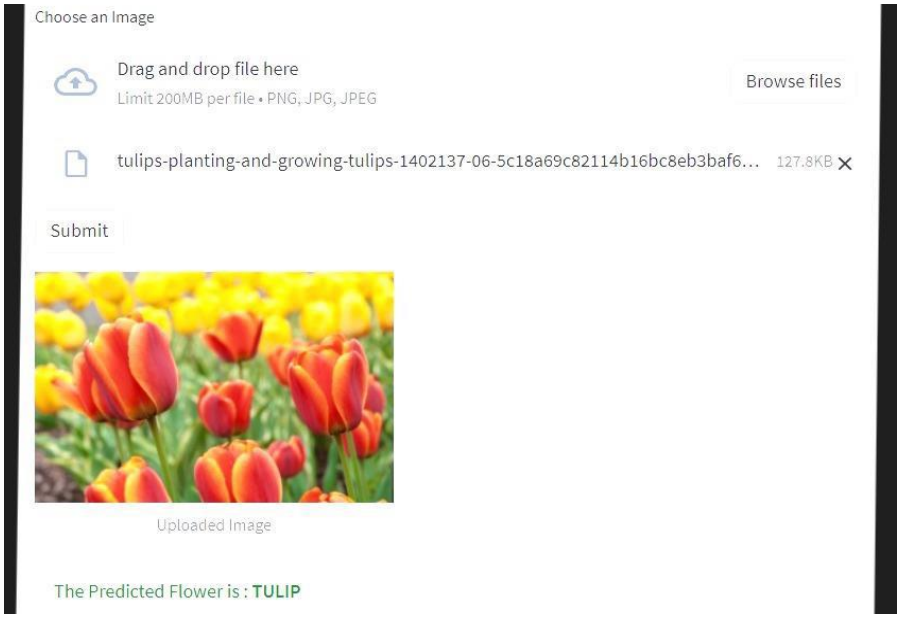

Figure 3: User Interface

e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:05/Issue:10/October-2023 Impact Factor- 7.868 www.irjmets.com

IV. RESULTS AND DISCUSSION

The final system would ensure a fully functional and fully trained model which will be capable enough to detect various kinds of flower species and provide information about them through uploading their photos to web application.

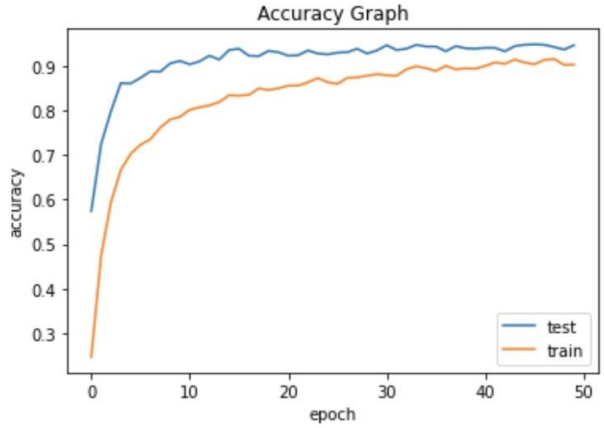

Figure 4: Analysis Graph

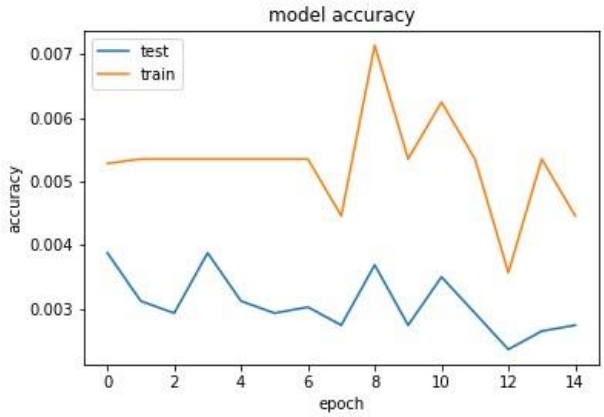

Figure 5: Analysis Graph

Figure 6: Outcome Result

V. CONCLUSION

In conclusion, the flower breed identification project has been a significant endeavor aimed at leveraging technology to enhance our understanding of floral diversity and aid in the identification of various flower breeds. Through this project, we have achieved several important milestones and gained valuable insights like accurate identification, robust performance, user-friendly interface, contribution to botanical research.

ACKNOWLEDGEMENTS

The authors wish to thank professor Mrs. Ritika Bhatt and Mrs. Bharti Bhattad.

VI. REFERENCES

[1] Varshney, R.K., et al. (2018). Agriculture 4.0: Broadening the horizons of crop improvement through genomics-assisted breeding. Cell, 175(2), 313-326

[2] Hickey, L.T., et al. (2019). Breeding crops to feed 10 billion. Nature Biotechnology, 37(7), 744-754

[3] Crossa, J., et al. (2017). Genomic selection in plant breeding: Methods, models, and perspectives. Trends in Plant Science, 22(11), 961-975

[4] Rife, T.W., et al. (2019). CropSight: A scalable and open-source information management system for distributed plant breeding research. GigaScience, 8(2), giz003

[5] Montesinos-López, O.A., et al. (2018). From plant breeding to precision agriculture for sustainable food production: A review. Agronomy for Sustainable Development, 38(4), 41

[6] Heffner, E.L., et al. (2009). Plant breeding with genomic selection: Gain per unit time and cost. Crop Science, 49(6), 1785-1795

[7] Endelman, J.B., & Jannink, J.L. (2012). Shrinkage estimation of the realized relationship matrix. G3: Genes, Genomes, Genetics, 2(11), 1405-1413

[8] Rincent, R., et al. (2018). Recovering power in association mapping panels with variable levels of linkage disequilibrium. Genetics, 208(4), 1565-1580