

Gender Classification from facial image

Group 8

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Outline

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Our Team



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Aim

- To build a system that can classify the person's gender from his/her facial image using deep learning.

Objectives

- Build a gender classification system based on facial images.
- Detect the accuracy of the male or female images in terms of percentage.
- Detect the gender from the provided dataset.

Scope of the project

This research focuses on employing a deep learning approach that comprises a Convolutional Neural Network to improve gender classification accuracy (CNN).

Several face datasets were collected from the internet and utilized as facial recognition system training material.

LITERATURE REVIEW

Paper Review

Mäkinen & Raisamo (2008)

An experimental comparison of gender classification methods

Tathe and Narote (2012), Chai et. al. (2009), and Rahman et. al. (2013)

A face detection technique using human skin color models.

Application Review

**GenderGet: Detect your gender with A.I.
(Classify)**

Requirements

1. Software Requirements

Google colab



Google Colab is a cloud-based Jupyter notebook environment that is free to use.

Anaconda



Anaconda is a distribution of the Python and R programming languages for scientific computing, that aims to simplify package management and deployment.

Technology



Computer Vision



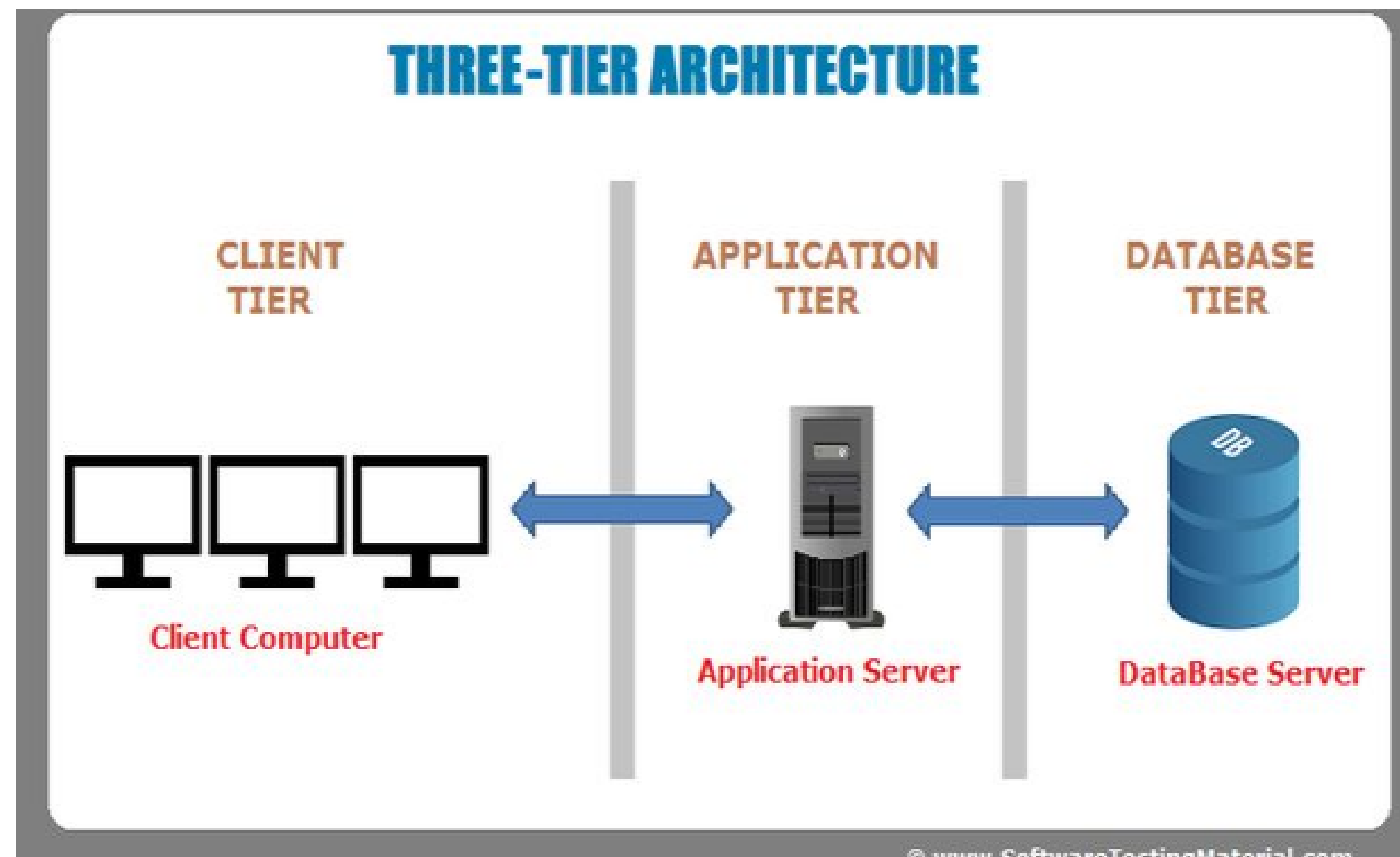
**Convolutional Neural
Network (CNN)**



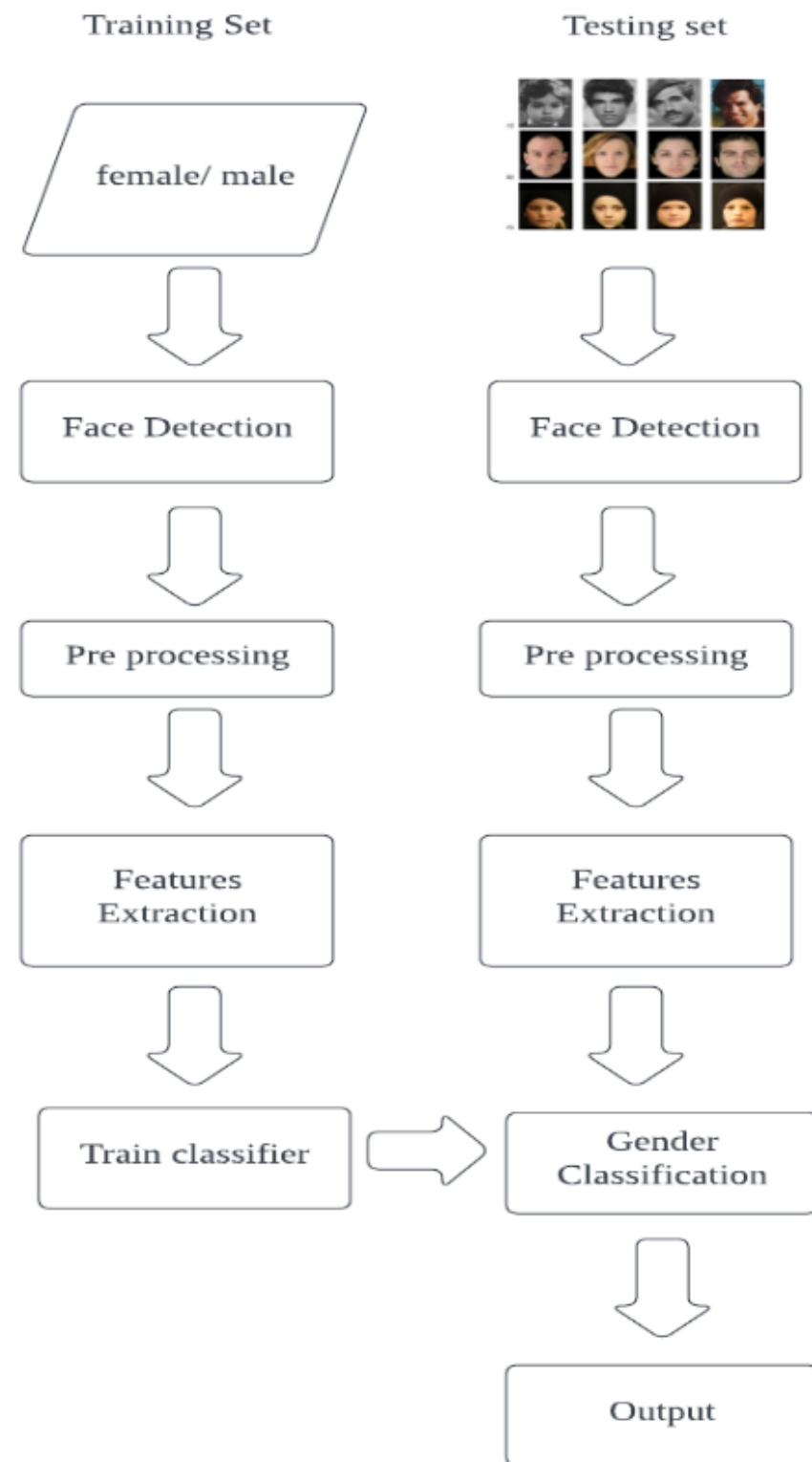
OpenCV

System Architecture

3-tier architecture



Work Flow



[illegible]

Conclusion

- The Gender detection will be deployed in a website using convenient frameworks. The website will have a function where user will be able to upload their picture in order to detect the gender.

Bibliography

- Chai, T. Y., Rizon, M., Woo, S. S. & Tan, C. S., 2009. *Facial Features for Template Matching Based Face Recognition*. American Journal of Applied Sciences, vol. 6, no. 11, pp. 1897-1901.
- Yang, MH & Ahuja, N, 2001, *Face Detection and Gesture Recognition for Human-Computer Interaction*, Springer Science & Business Media, Boston.
- Sirovich, L. & Kirby, M., 1987, 'Low-dimensional procedure for the characterization of human faces', Journal of Optical Society of America, vol. 4, no. 3, p. 519.

A black and white photograph of a man with dark hair and glasses, wearing a suit and tie, sitting at a desk and working on a laptop. The background shows a modern office environment with large windows and a potted plant. A teal-colored rectangular box with rounded corners is overlaid on the image, containing the text "Thank You" and a row of teal dots.

Thank You

