Outline:

BAB II TINJAUAN PUSTAKA

Bab ini menjelaskan tentang definisi dan teori-teori yang digunakan sebagai landasan penelitian yang berasal dari hasil publikasi dan penelitian dan/atau buku yang relevan.

AKSARA JAWA

CITRA DIGITAL

CITRA BERWARNA

PENGOLAHAN CITRA DIGITAL

RESCALE/RESIZE

AUGMENTASI

NORMALISASI atau STANDARDISASI

DEEP LEARNING

LAYERS

ACTIVATION

FULLY CONNECTED

DROP OUT

POOLING

CNN

OPTIMIZER

LOSS FUNCTION

METRICS

TRANSFER LEARNING

*PRE-TRAINED MODEL*

XCEPTION

INCEPTION

VGG

CONFUSION MATRIX

ALBUMENTATIONS (library)

TENSORFLOW (library)

**TINJAUAN PUSTAKA**

Review paper

**LANDASAN TEORI**

**AKSARA JAWA**

BELOM

**CITRA DIGITAL**

**CITRA BERWARNA**

BELOM

**PENGOLAHAN CITRA DIGITAL**

image processing, set of computational techniques for analyzing, enhancing, compressing, and reconstructing images. Its main components are importing, in which an image is captured through scanning or digital photography; analysis and manipulation of the image, accomplished using various specialized software applications; and output (e.g., to a printer or monitor). Image processing has extensive applications in many areas, including astronomy, medicine, industrial robotics, and remote sensing by satellites.

“Digital Image Processing” by Rafael C. Gonzalez and Richard E. Woods.

**RESCALE/RESIZE (BILINEAR INTERPOLATION)**

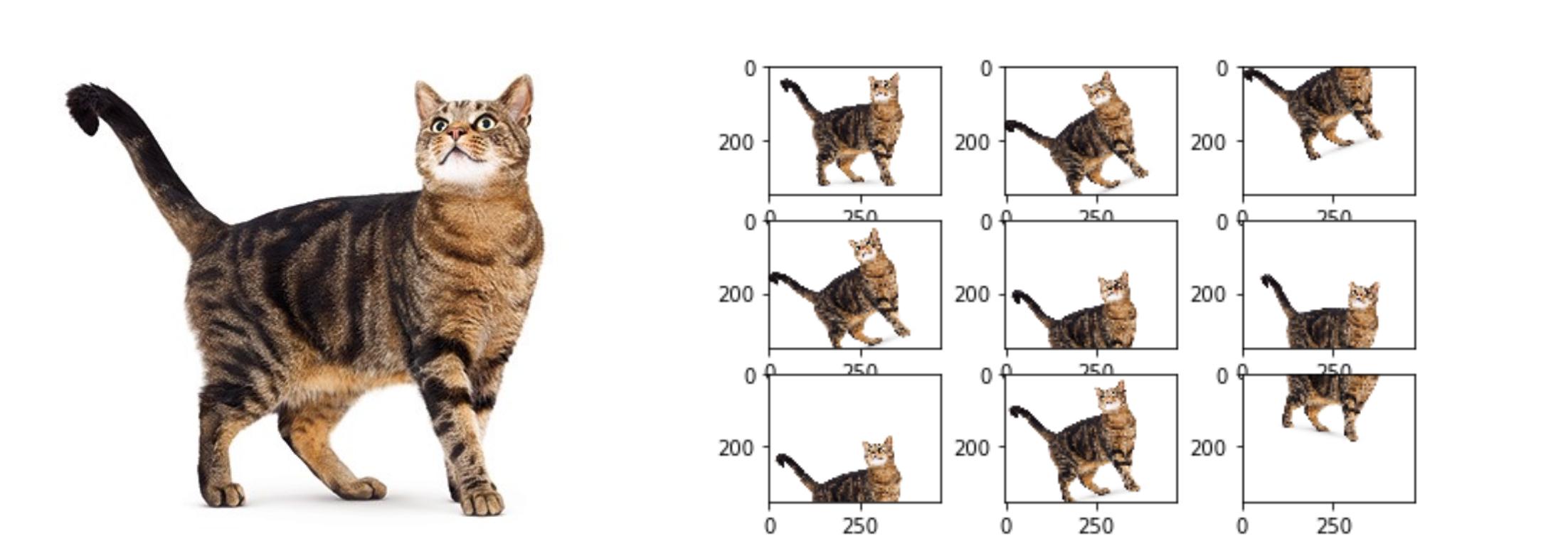
A picture containing diagram, line

Description automatically generated

Source: [Image Processing – Bilinear Interpolation | TheAILearner](https://theailearner.com/2018/12/29/image-processing-bilinear-interpolation/) <https://i0.wp.com/theailearner.com/wp-content/uploads/2018/10/Bilinear_interpolation.png?w=423&ssl=1>

Resizing images is a critical pre-processing step in computer vision. Principally, deep learning models train faster on small images. A larger input image requires the neural network to learn from four times as many pixels, and this increase the training time for the architecture [30].

**DATA AUGMENTATION**



Source: <https://149695847.v2.pressablecdn.com/wp-content/uploads/2020/08/UKwFg.jpg>

[How Data Augmentation Impacts Performance Of Image Classification (analyticsindiamag.com)](https://analyticsindiamag.com/image-data-augmentation-impacts-performance-of-image-classification-with-codes/)

Data augmentation goal is to add new data points to the input space by modifying training images while preserving semantic information and target labels. Thus, it is used to reduce overfitting [29].

Our results confirm the importance of data augmentation in both training and testing and show that it can lead to more performance gains than obtaining new images [29].

**NORMALISASI atau STANDARDISASI**

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Description automatically generated

A picture containing font, white, diagram, line

Description automatically generated

Image normalization or standardization ensures optimal comparisons across data acquisition methods and texture instances. The normalization of pixel values (intensity) is recommended for imaging modalities that do not correspond to absolute physical quantities [31, 32].

**TRANSFER LEARNING**

Transfer learning is the improvement of learning in a new task through the transfer of knowledge from a related task that has already been learned [33].

BAB I

13: Implementation of Optical Character Recognition using Tesseract with the Javanese Script Target in Android Application, Urbanization and Regional Imbalances in Indonesia, Rancang Bangun Aplikasi Pembelajaran Aksara Jawa Berbasis Android

14: Implementation of Optical Character Recognition using Tesseract with the Javanese Script Target in Android Application, Urbanization and Regional Imbalances in Indonesia, Rancang Bangun Aplikasi Pembelajaran Aksara Jawa Berbasis Android

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BAB II

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# References

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