

CHAPTER 4

ANALYSIS AND DESIGN

4.1. Analysis

The problem in this project is to classify the types of betta fish. There are 3 types used, namely Crowntail, Plaque, and Halfmoon. The amount of data that is trained is 259 images. Then the 259 images are processed to avoid overfitting such as flip, zoom, rotation, etc. After the process is done, it produces a total of 1507 images. Of the 1507 images, 20% were taken to be used as validation. Total train images 1205 and total validate images 302. After the dataset, the next step is the convolution process in which all datasets will be entered into the convolution layer so that the system can know that this is an image with a predetermined type of fish.

The next step is the training process. The data that has been processed will be trained with several repetitions to find the highest accuracy results. Experiments were carried out with 10,25,50,75,100 epocs.

The last process is the process of testing the results of the training process. This process takes 25 images of test data consisting of Crowntail, Plakat, and Halfmoon.

4.2. Design

This is the step by step method used to write this research. The first step is to find the dataset needed for the training process. After the dataset is collected, the next step is the convolution layer, after that step, the dataset is trained and produces training data. The next step is testing the testing data and finally analyzing the results.

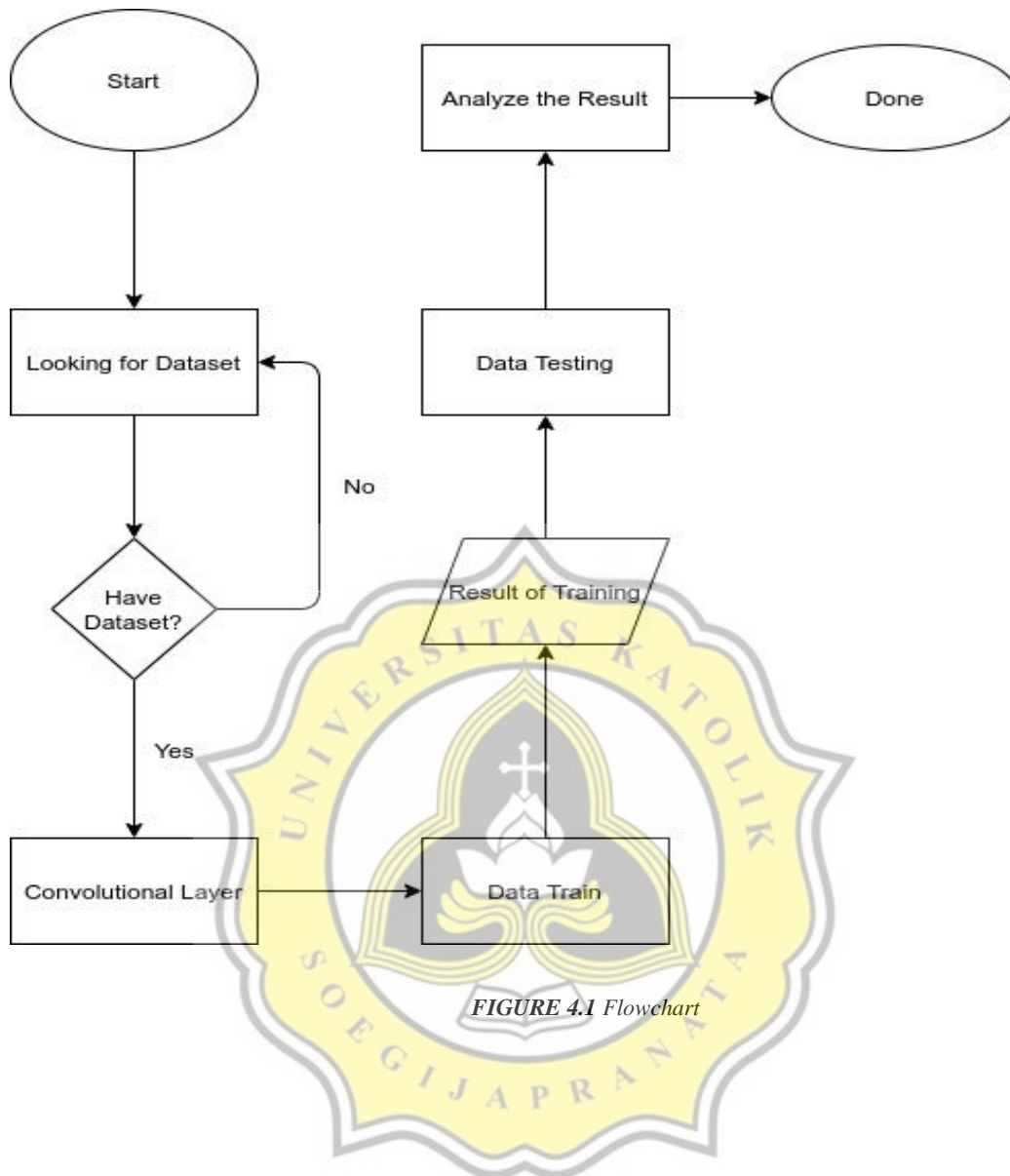


FIGURE 4.1 Flowchart