CHAPTER 1
INTRODUCTION

1.1. Background

The population of ornamental fish is increasing during the Covid-19 pandemic, especially betta fish. In addition to the affordable price, its maintenance is also relatively easy. Betta fish are collected from various groups ranging from children to adults.

There are many types of betta fish, but the most common or most famous in Indonesia are crowntail, halfmoon, and plaque. But not everyone can understand the type of betta fish. Therefore, detection of fish species is needed to help people who want to keep betta fish but don't know the type of betta fish. One method that can be used to detect betta fish is the Convolutional Neural Network (CNN). Convolutional Neural Network (CNN) is a type of neural network commonly used in image data. CNN can be used to detect and recognize objects in an image. Broadly speaking Convolutional Neural Network (CNN) not much different from the usual neural network. CNN consists of neurons that have weight, bias and activation functions. The convolutional layer also consists of neurons arranged in such a way that they form a filter with length and height (pixels).

1.2. Problem Formulation

Based on the background of research above, the problem of the study is:

1. Whether CNN is effective enough to identify the datasets?
2. What percentage does generate in identify the datasets?
3. Comparing Relu, Elu, and Tanh activation

1.3. Scope

This study focuses on the detection of crowntail, halfmoon, and plakat types of betta fish using CNN and the analysis of what percentage is obtained using several datasets with various images of Crowntail, Halfmoon, Plakat betta fish.

1.4. Objective

The aim of this project is to test how accurate CNN is in classifying Betta fish