

# CHAPTER 1

## INTRODUCTION

### 1.1 Background

Kopi Luwak is a famous coffee brand in Indonesia. Kopi Luwak has three main different kind of coffee, they are Black Coffee, White Koffie, and High Class Coffee. Black Coffee is Luwak famous coffee type. White Koffie is brand new coffee type develop by Luwak Company. High Class Coffee is different from the other two because it has different processing steps and uses higher quality coffee. Kopi Luwak also sell creamer and sometime they include gift set in their promotion.

Due to the large number of customers demand, the sales order in Luwak company itself increases significantly. To fulfill the customers demand, the stock must be provided. Because of this problem, the company need a supporting program that can predict sales stock everyday. They need supporting program because the stock is hard to calculate with manual calculation.

The prediction program using data obtained from the company. The program calculation method using the Backpropagation algorithm. The Backpropagation algorithm is a neural network algorithm that can do calculations using existing data and learn from mistakes to predict more accurate. Yanto, et al. (2018) had already used this algorithm for their project and then the researcher use this algorithm with expectation of same result.

The data obtained is sales data that had different number of sales every day (high fluctuating rate). From the data obtained, sometimes the company sells for only 1 item in one day and at the other times they sells for hundreds of thousands items in one day. The data is taken from January 2017 until June 2018 and divided into two parts : the training data and the testing data. The parameter that used in this project are: Date, Coffee Type, and Coffee Packaging, then the calculation

will use different hidden layers. The result from different hidden layers will be compared with the original results.

## 1.2 Scope

The problems that will be discussed in this project are:

1. Can this program predict stock sales of Kopi Luwak?
2. Is the Backpropagation algorithm suitable for coffee sales stock prediction?
3. What are the results of the accuracy from testing the algorithm 10 times?

## 1.3 Objective

The purpose of this project is to produce a program that can predict the Luwak Coffee sales stock. This project also implements the Backpropagation algorithm to try whether this algorithm can be used for this case or not.

