RETAIL PRICE OPTIMIZER

PROJECT SYNOPSIS

Machine Intelligence

BACHELOR OF TECHNOLOGY- V Sem CSE

Department of Computer Science & Engineering

SUBMITTED BY

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Abstract and Scope:

This project will create a machine learning model to predict the retail price of goods over time to help an entrepreneur understand pricing factors in the industry.

This involves a descriptive analysis with data cleaning, feature selection, model building and evaluation.

We will be using python libraries such as numpy, pandas, matplotlib, scikit-learn, etc. The model will be tested using Linear Regression, Decision Trees, Neural Networks, etc.

Terms: Retail Price, Freight Price, Regression, Decision Tree, Neural Networks.

Feasibility Study:

Price is a key driver of success in retail, especially now it's so easy to find a deal online. That's why price prediction in retail goes hand in hand with product analytics: you can analyze the demand, discover a product's advantages and disadvantages, then determine whether a customer will buy it.

Design Approach/ Methodology/ Planning of work:

Our first step is to import the dataset and do pre-processing. We will get rid of all null values, either by pruning or by filling with appropriate central tendency.

The next step is to remove any columns that will not help in training the machine learning model. A correlation heat map will be created to give a visual representation of the strongly correlated variables.

We will then test out multiple regression algorithms. We will then evaluate each model based on metrics such as Mean Absolute Error, Mean Squared Error, etc. We will decide to

use the most accurate model.

If possible, we will tweak the model so that we can optimize it even further.

Workflow Diagram: