Model Input Layer

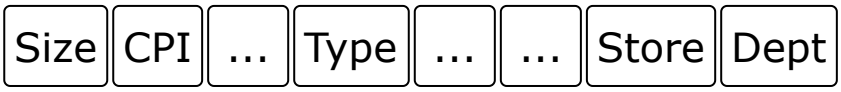
Understand the purpose of using feature columns for the model's input layer.

Chapter Goals:

- Aggregate the feature columns for the machine learning model's input layer

A. The input layer

The reason we create feature columns for each of the input data features is so that we can easily make the input layer vector for the machine learning model. The input layer is simply the combination of the numeric, indicator, and embedding feature columns.



The input layer vector for the machine learning model. It is the combination of all the feature columns.

Using the functions from the three previous chapters, we can create the feature columns for the entire dataset. The function below, `create_feature_columns` does exactly that.

```
import tensorflow as tf

def create_feature_columns(final_dataset):
    feature_columns = []
    add_numeric_columns(feature_columns)
    add_indicator_columns(final_dataset, feature_columns)
    add_embedding_columns(final_dataset, feature_columns)
    return feature_columns

feature_columns = create_feature_columns(final_dataset)
print(feature_columns)
```

Creating feature columns for the entire dataset. The input final_dataset is the final dataset DataFrame.

In chapter 8 of the **Model Creation** section, you'll use the feature columns to actually create the model's input layer.