

TEAM ID: PNT2022TMID44529

PROJECT NAME: DemandEst - AI powered Food DemandForecaster

Team Leader

Splitting The Dataset Into Dependent And Independent Variable

In machine learning, the concept of dependent variable (y) and independent variables(x) is important to understand. Here, Dependent variable is nothing but output in dataset and independent variable is all inputs in the dataset.

With this in mind, we need to split our dataset into the matrix of independent variables and the vector or dependent variable. Mathematically, Vector is defined as a matrix that has just one column.

Let's split our dataset into independent and dependent variables.

1. The independent variable in the dataset would be considered as 'x' and the 'homepage_featured', 'emailer_for_promotion', 'op_area', 'cuisine', 'city_code', 'region_code', 'category' columns would be considered as independent variable.
2. The dependent variable in the dataset would be considered as 'y' and the 'num_orders' column is considered as dependent variable.

```
In [122]: features = columns.drop(['num_orders'])
trainfinal3 = trainfinal[features]
X = trainfinal3.values
y = trainfinal['num_orders'].values
```

```
In [123]: trainfinal3.head()
```

	homepage_featured	emailer_for_promotion	op_area	cuisine	city_code	region_code	category
0	0	0	2.0	3	647	56	0
1	0	0	2.0	3	647	56	0
2	0	0	2.0	3	647	56	0

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1	0	0	2.0	3	647	56	0
2	0	0	2.0	3	647	56	0
3	0	0	2.0	3	647	56	0
4	0	0	2.0	3	647	56	0

Team Member 1

The screenshot displays a Jupyter Notebook running in a web browser. The browser's address bar shows the URL: `localhost:8891/notebooks/Downloads/SBSPS-Challenge-8325-Food-Demand-Forecasting-for-Food-Delivery-Company-using-IBM-Cloud-main/SBSPS-Challenge-...`. The notebook interface includes a menu bar (File, Edit, View, Insert, Cell, Kernel, Widgets, Help), a toolbar with icons for file operations and execution, and a status bar indicating the kernel is 'Python 3 (ipykernel)' and is 'Not Connected'.

The notebook content consists of the following text and code:

output in dataset and independent variable is all inputs in the dataset.

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          y = trainfinal['num_orders'].values
```

```
In [123]: trainfinal3.head()
```

The output of the code is a table showing the first five rows of the dataset:

	homepage_featured	emailer_for_promotion	op_area	cuisine	city_code	region_code	category
0	0	0	2.0	3	647	56	0
1	0	0	2.0	3	647	56	0
2	0	0	2.0	3	647	56	0
3	0	0	2.0	3	647	56	0
4	0	0	2.0	3	647	56	0

Team Member 2

The screenshot shows a Jupyter Notebook running in a web browser. The browser tabs include 'IBM', 'Home Page - Select or create a n...', and 'Code - Jupyter Notebook'. The address bar shows the URL: `localhost:8891/notebooks/Downloads/SBSPS-Challenge-8325-Food-Demand-Forecasting-for-Food-Delivery-Company-using-IBM-Cloud-main/SBSPS-Challenge-...`. The Jupyter interface has a top bar with 'jupyter Code (autosaved)' and a 'Logout' button. Below this is a menu bar (File, Edit, View, Insert, Cell, Kernel, Widgets, Help) and a status bar showing 'Not Connected', 'Not Trusted', and 'Python 3 (ipykernel)'. The notebook content includes:

output in dataset and independent variable is all inputs in the dataset.

With this in mind, we need to split our dataset into the matrix of independent variables and the vector or dependent variable. Mathematically, Vector is defined as a matrix that has just one column.

Let's split our dataset into independent and dependent variables.

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```
In [123]: trainfinal3.head()
```

Out[123]:

	homepage_featured	emailer_for_promotion	op_area	cuisine	city_code	region_code	category
0	0	0	2.0	3	647	56	0
1	0	0	2.0	3	647	56	0
2	0	0	2.0	3	647	56	0
3	0	0	2.0	3	647	56	0
4	0	0	2.0	3	647	56	0

1	0	0	2.0	3	647	56	0
2	0	0	2.0	3	647	56	0

Team Member 3

The screenshot shows a Jupyter Notebook running on a local host. The notebook is titled "Code (autosaved)" and is using a Python 3 (ipykernel) environment. The interface includes a menu bar (File, Edit, View, Insert, Cell, Kernel, Widgets, Help) and a toolbar with icons for file operations, running cells, and other functions. The status bar at the top indicates "Not Connected" and "Not Trusted".

The notebook content includes the following text and code:

output in dataset and independent variable is all inputs in the dataset.

With this in mind, we need to split our dataset into the matrix of independent variables and the vector or dependent variable. Mathematically, Vector is defined as a matrix that has just one column.

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1	0	0	2.0	3	647	56	0
2	0	0	2.0	3	647	56	0
3	0	0	2.0	3	647	56	0
4	0	0	2.0	3	647	56	0

The table shows that the first five rows of the dataset have the same values for the independent variables (homepage_featured, emailer_for_promotion, op_area, cuisine, city_code, region_code, category) and the dependent variable (num_orders).