# Case Study 3 - Patterns and Trends of Customer Behavior

## DarkAstronaut

**Aim**

The aim of this case study is to find how a Customer acts (Purchases made by the customer) and to gain an insight on the type of the purchases made on an online platform in various countries.

**Data**

We use the dataset **OnlineRetail.xlsx** (Source: Kaggle). The data is in a Excel Workbook (XLSX) File with 8 Attributes and 541909 Observations. The attributes are:

```
## [1] "InvoiceNo"   "StockCode"   "Description" "Quantity"    "InvoiceDate"
## [6] "UnitPrice"   "CustomerID"  "Country"
```

and the sample data is:

```
##   InvoiceNo StockCode                          Description Quantity
## 1    536365    85123A  WHITE HANGING HEART T-LIGHT HOLDER        6
## 2    536365     71053                  WHITE METAL LANTERN        6
## 3    536365    84406B      CREAM CUPID HEARTS COAT HANGER        8
## 4    536365    84029G KNITTED UNION FLAG HOT WATER BOTTLE        6
## 5    536365    84029E       RED WOOLLY HOTTIE WHITE HEART.        6
## 6    536365     22752          SET 7 BABUSHKA NESTING BOXES       2
##           InvoiceDate UnitPrice CustomerID        Country
## 1 2010-12-01 08:26:00      2.55      17850 United Kingdom
## 2 2010-12-01 08:26:00      3.39      17850 United Kingdom
## 3 2010-12-01 08:26:00      2.75      17850 United Kingdom
## 4 2010-12-01 08:26:00      3.39      17850 United Kingdom
## 5 2010-12-01 08:26:00      3.39      17850 United Kingdom
## 6 2010-12-01 08:26:00      7.65      17850 United Kingdom
```

Instead of working on the complete data, we will take few contries from the below mentioned list

```
##  [1] "Australia"        "Austria"         "Bahrain"
##  [4] "Belgium"          "Brazil"          "Canada"
##  [7] "Channel Islands"  "Cyprus"          "Czech Republic"
## [10] "Denmark"          "EIRE"            "European Community"
## [13] "Finland"          "France"          "Germany"
## [16] "Greece"           "Hong Kong"       "Iceland"
## [19] "Israel"           "Italy"           "Japan"
## [22] "Lebanon"          "Lithuania"       "Malta"
## [25] "Netherlands"      "Norway"          "Poland"
## [28] "Portugal"         "RSA"             "Saudi Arabia"
```

```
## [31] "Singapore"           "Spain"                "Sweden"
## [34] "Switzerland"          "United Arab Emirates" "United Kingdom"
## [37] "Unspecified"          "USA"
```