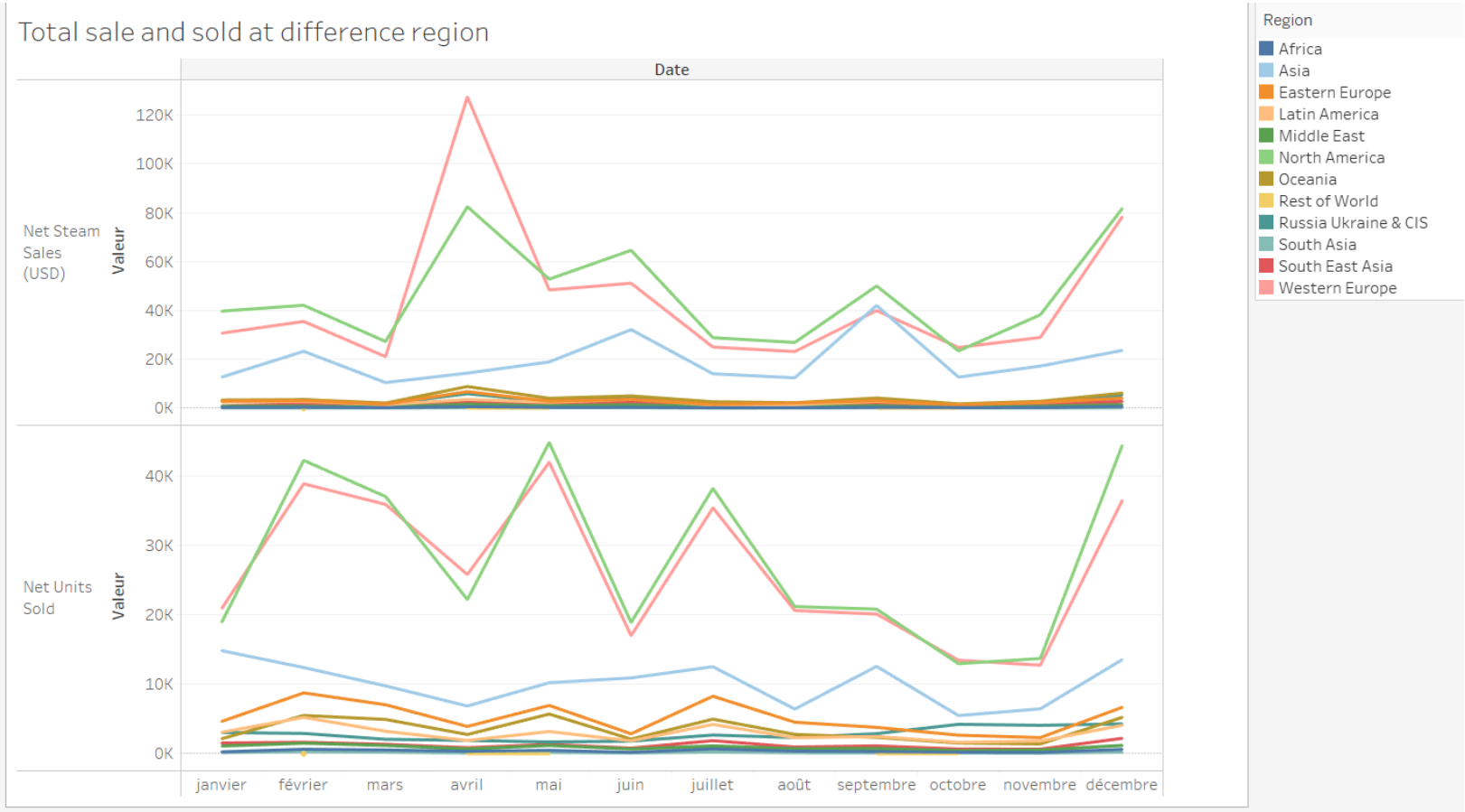
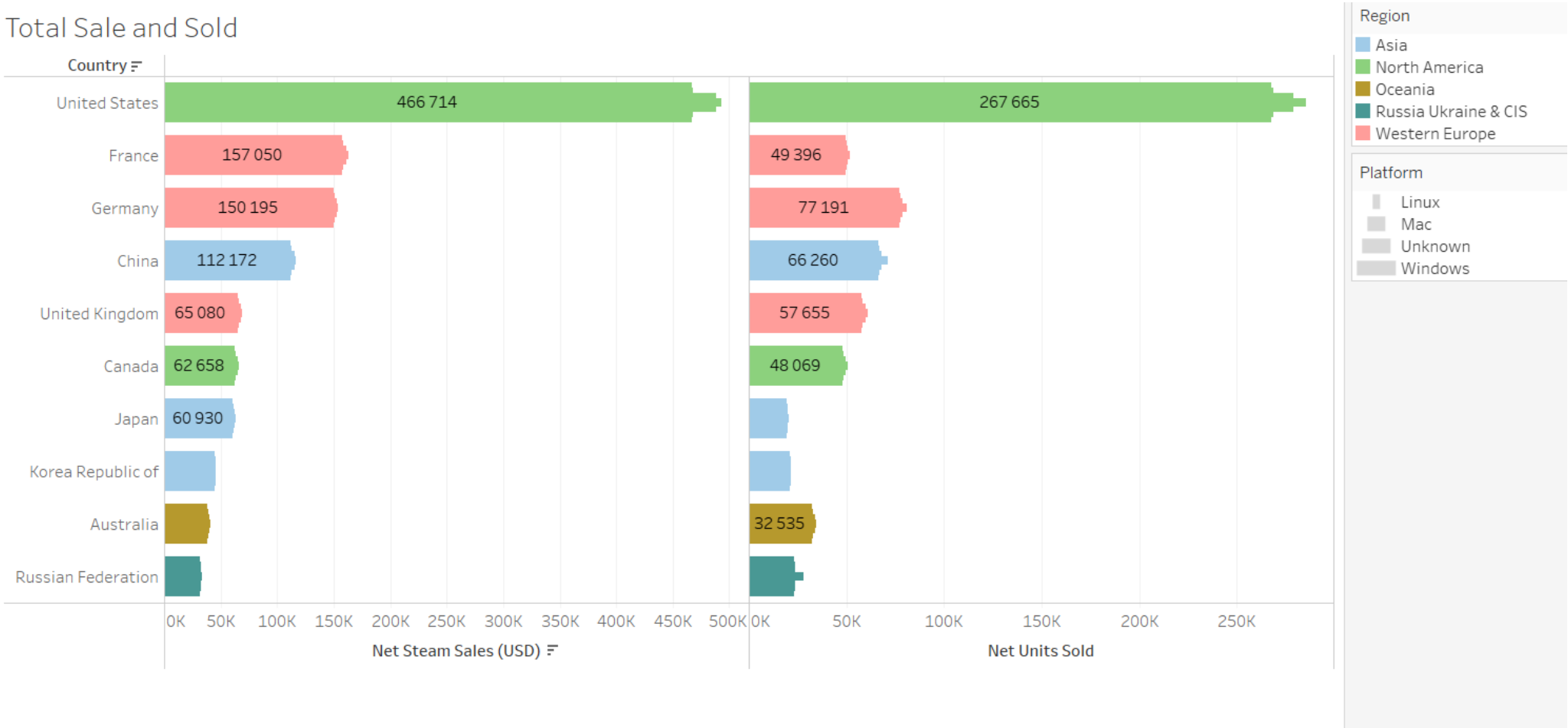
Game market: analysis and prediction

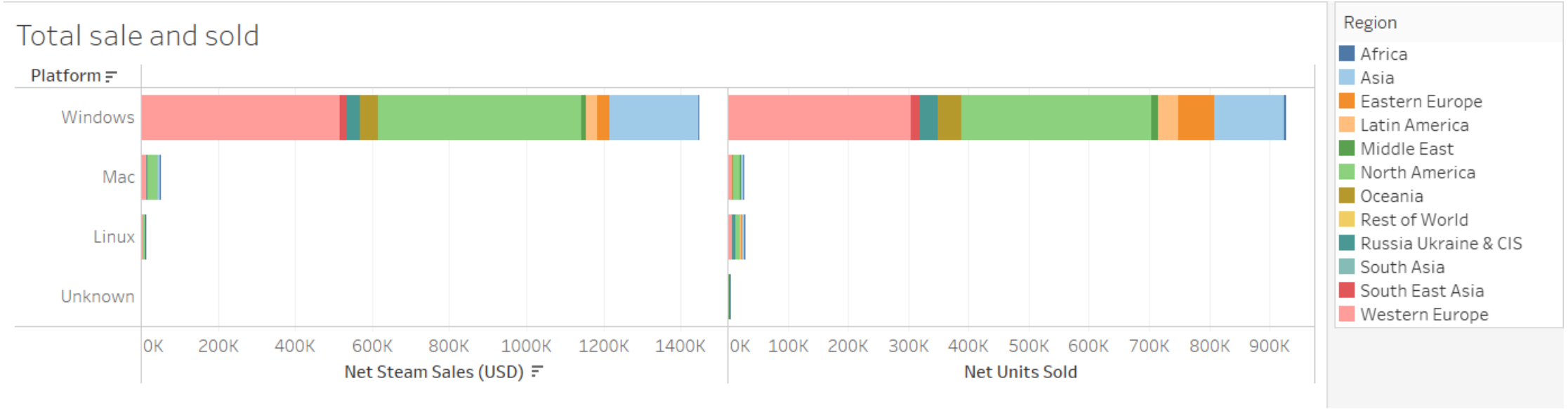
Data visualisation with Tableau



The 2 most region market are Western Europe and North America



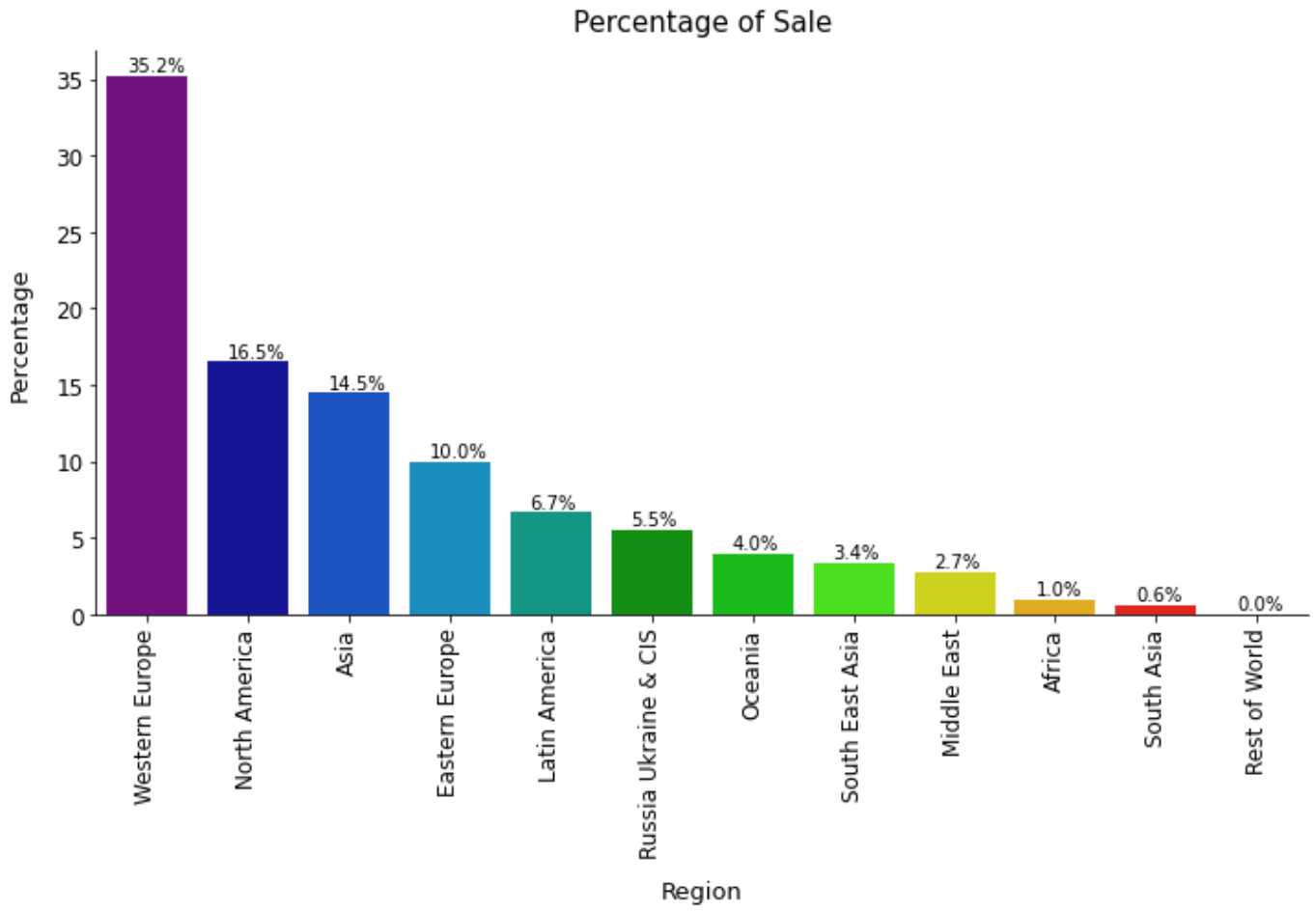
The United States is the biggest market for game publisher.

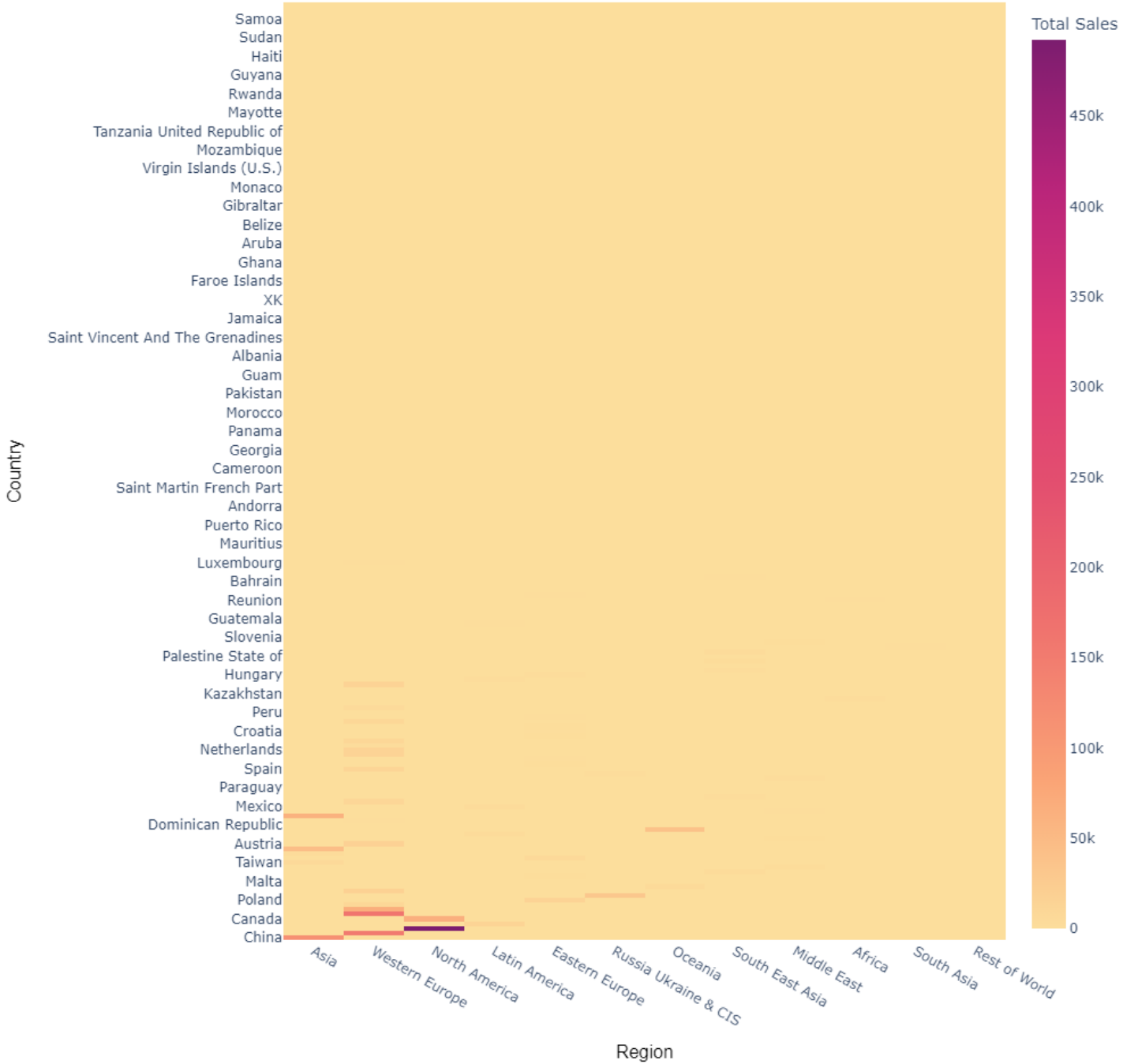


	Platform			
Region	Windows	Mac	Linux	Unknown
Asia	97.44%	2.41%	0.15%	0.00%
Western Europe	96.45%	2.61%	0.93%	0.00%
Latin America	96.39%	2.05%	1.57%	0.00%
Eastern Europe	96.28%	1.87%	1.85%	0.00%
Middle East	95.91%	2.99%	1.10%	0.00%
Russia Ukraine ..	95.07%	3.38%	1.54%	0.00%
North America	94.78%	4.35%	0.86%	0.00%
South East Asia	94.45%	4.93%	0.62%	0.00%
Oceania	94.30%	4.82%	0.88%	0.00%
Africa	93.27%	4.50%	2.23%	0.00%
South Asia	91.03%	6.43%	2.54%	0.00%

Window is the biggest platform for game player with over 90% for all the region

Data visualisation with Python





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Machine Learning

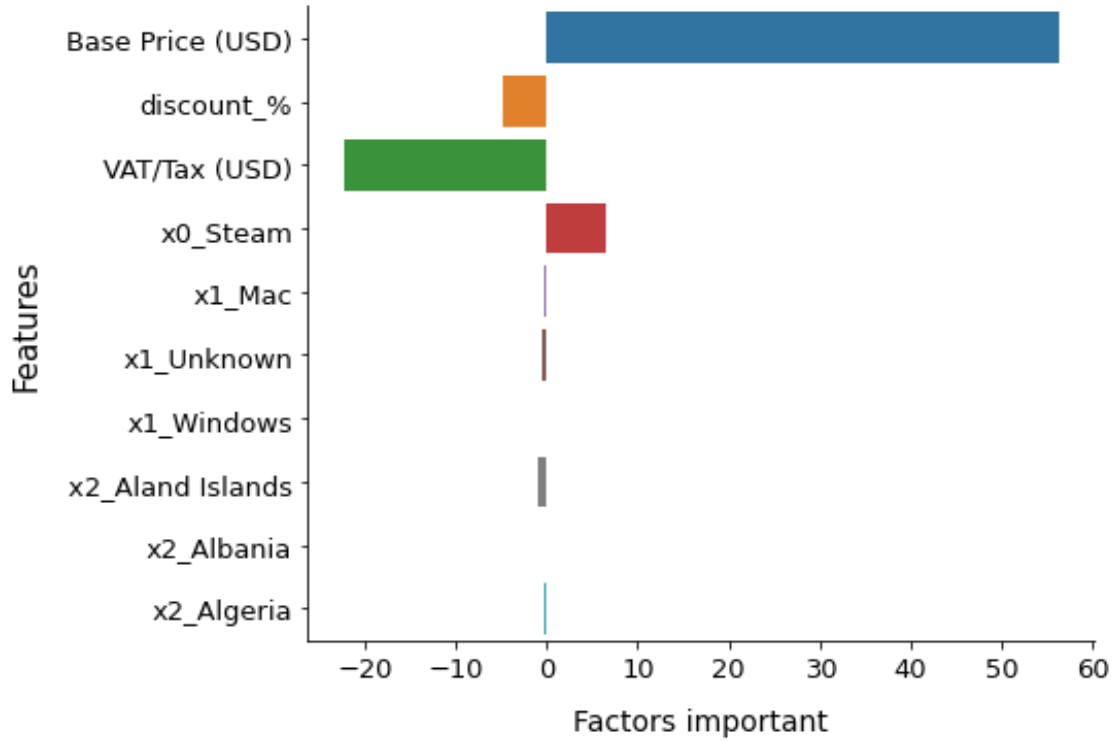
Prediction total sale

```
# calculate discount percentage
df["discount_%"] = ((df["Base Price"]-df["Sale Price"])/df["Base Price"])*100
df["discount_%"] = df["discount_%"].fillna(0)

# convert Base Price to USD
df["Base Price (USD)"] = df["Base Price"]*(df["Gross Steam Sales
(USD)"]/df["Sale Price"])
df["Base Price (USD)"] = df["Base Price (USD)"].fillna(0)

# all the country having value count < 10 is convert to "other"
mask = df["Country"].map(df["Country"].value_counts()) < 10
df["Country"] =  df["Country"].mask(mask, "other")
```

numeric features: ['Base Price (USD)', 'discount_%', 'VAT/Tax (USD)']
categorical features ['Type', 'Platform', 'Country']



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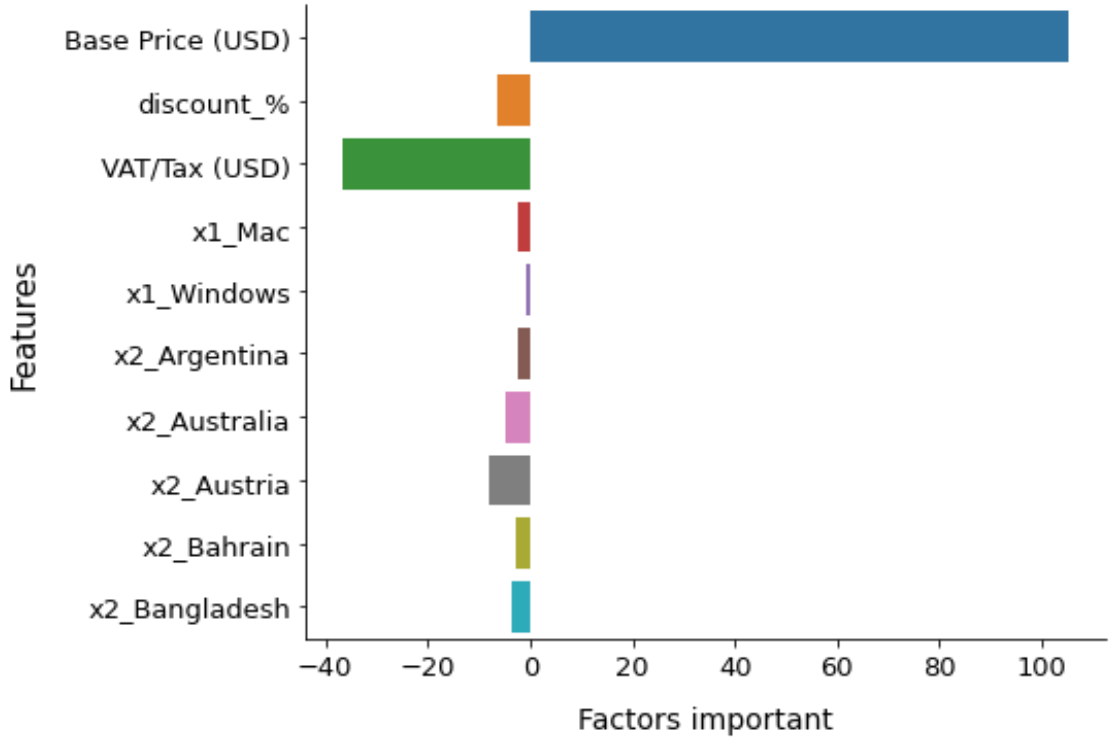
# convert Base Price to USD
df["Base Price (USD)"] = df["Base Price"]*(df["Gross Steam Sales
(USD)"]/df["Sale Price"])
df["Base Price (USD)"] = df["Base Price (USD)"].fillna(0)

df_ML1 = df_ML[df_ML["Base Price (USD)"] != 0]


# all the country having value count < 10 is convert to "other"
mask = df_ML1["Country"].map(df_ML1["Country"].value_counts()) < 10
df_ML1["Country"] =  df_ML1["Country"].mask(mask, 'other')

numeric features: ['Base Price (USD)', 'discount_%', 'VAT/Tax (USD)']
categorical features ['Type', 'Platform', 'Country']
```



In both case, the most importance feature is « base price » of product.