In [1]:

```
import numpy as np
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
import warnings
warnings.filterwarnings('ignore')
```

In [2]:

```
xhamster_data = pd.read_csv("xhamster.csv")
```

In [3]:

```
xhamster_data.head()
```

Out[3]:

	id	upload_date	title	channels	description	nb_views	nb_votes	nb_comr
0	378466	29-06-2010	girl riding black cock	['BBW', 'Black and Ebony', 'Interracial']	Like this vid? Check out my profile page for m...	17262.0	65.0	
1	478576	07-11-2010	masturbation	['Masturbation']	watching a ebony chick cum.	953.0	3.0	
2	287146	12-02-2010	sexy horny booty dance	['Babes', 'Teens', 'Webcams']	Watch as this sexy hot horny babe bounce her n...	6060.0	11.0	
3	378462	29-06-2010	group of young bareback sportsmen d	['Men']	NaN	12742.0	87.0	
4	1583073	18-11-2012	horny latinos double penetrating hot ass in a ...	['Gays']	Three Brazilian latino studs get horny in a st...	32879.0	75.0	

In [4]:

```
xhamster_data.tail()
```

Out[4]:

:cription	nb_views	nb_votes	nb_comments	runtime	uploader
THIS :OLATE :TORY .nGETS :)PPE...	5842.0	21.0	4.0	269.0	9665e50e0d4683aa88cf78f5c6c095e2064568ea
NaN	64355.0	131.0	7.0	178.0	241d12c4cbd2dc2551199bb767bcc8041854f45c
NaN	26708.0	58.0	7.0	115.0	241d12c4cbd2dc2551199bb767bcc8041854f45c
NaN	17156.0	36.0	5.0	603.0	fd38c6065b9e7f545ec71be0acd6d1340783ec2e
NaN	24503.0	136.0	57.0	98.0	f50680c6576cfa93935a8b49dfa06dc90703192d

In [5]:

```
xhamster_data.shape
```

Out[5]:

```
(786121, 10)
```

In [6]:

```
xhamster_data.columns
```

Out[6]:

```
Index(['id', 'upload_date', 'title', 'channels', 'description', 'nb_view
s',
       'nb_votes', 'nb_comments', 'runtime', 'uploader'],
      dtype='object')
```

In [7]:

```
xhamster_data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 786121 entries, 0 to 786120
Data columns (total 10 columns):
 #   Column       Non-Null Count   Dtype  
---  ------       --------------   -----  
 0   id           786121 non-null  int64  
 1   upload_date  785119 non-null  object 
 2   title        785329 non-null  object 
 3   channels     785119 non-null  object 
 4   description  383373 non-null  object 
 5   nb_views     785119 non-null  float64
 6   nb_votes     785119 non-null  float64
 7   nb_comments  726301 non-null  float64
 8   runtime      785119 non-null  float64
 9   uploader     753200 non-null  object 
dtypes: float64(4), int64(1), object(5)
memory usage: 60.0+ MB
```

In [8]:

```
xhamster_data.describe()
```

Out[8]:

	id	nb_views	nb_votes	nb_comments	runtime
count	7.861210e+05	7.851190e+05	785119.000000	726301.000000	7.851190e+05
mean	9.292871e+05	7.550614e+04	127.861243	11.716061	6.749709e+02
std	5.022363e+05	1.733908e+05	240.880249	14.874591	3.371810e+03
min	3.000000e+00	1.000000e+00	0.000000	1.000000	0.000000e+00
25%	5.098190e+05	5.990000e+03	20.000000	3.000000	1.280000e+02
50%	9.421340e+05	2.299000e+04	56.000000	7.000000	3.590000e+02
75%	1.364660e+06	7.073600e+04	138.000000	15.000000	9.280000e+02
max	1.762464e+06	8.286734e+06	17171.000000	885.000000	2.752990e+06

In [9]:

```
xhamster_data.isnull().sum()
```

Out[9]:

```
id                 0
upload_date     1002
title            792
channels        1002
description   402748
nb_views        1002
nb_votes        1002
nb_comments    59820
runtime         1002
uploader       32921
dtype: int64
```

In [10]:

```
xhamster_data = xhamster_data.drop(['id', 'upload_date', 'description',
                                    'nb_comments', 'uploader'], axis = 1)
```

In [11]:

```
xhamster_data.shape
```

Out[11]:

```
(786121, 5)
```

In [12]:

```
xhamster_data.columns
```

Out[12]:

```
Index(['title', 'channels', 'nb_views', 'nb_votes', 'runtime'], dtype='obj
ect')
```

In [13]:

```
xhamster_data.dropna(inplace = True)
```

In [14]:

```
xhamster_data.isnull().sum()
```

Out[14]:

```
title       0
channels    0
nb_views    0
nb_votes    0
runtime     0
dtype: int64
```

In [15]:

```
xhamster_data.shape
```

Out[15]:

```
(784328, 5)
```

In [16]:

```
xhamster_data['channels'].unique()
```

Out[16]:

```
array(["['BBW', 'Black and Ebony', 'Interracial']", "['Masturbation']",
       "['Babes', 'Teens', 'Webcams']", ...,
       "['Black and Ebony', 'Tits', 'Group Sex', 'Big Boobs', 'MILFs']",
       "['Anal', 'Bisexuals', 'Indian']",
       "['British', 'Squirting', 'Webcams']"], dtype=object)
```

In [17]:

```
xhamster_data['channels'].value_counts()
```

Out[17]:

```
['Men']                                              110374
['Gays', 'Men']                                       19735
['Amateur']                                           18558
['Shemales']                                          15040
['Gays']                                              14837
                                                      ...
['Amateur', 'Matures', 'Old+Young', 'Strapon']            1
['Latin ', 'Lingerie', 'Spanking']                        1
['Cumshots', 'Face Sitting', 'Lingerie', 'Teens']         1
['Asian', 'Lesbians', 'Masturbation', 'Japanese']         1
['British', 'Squirting', 'Webcams']                       1
Name: channels, Length: 54583, dtype: int64
```

In [22]:

```
xhamster_channels = xhamster_data['channels'].value_counts()
```

In [24]:

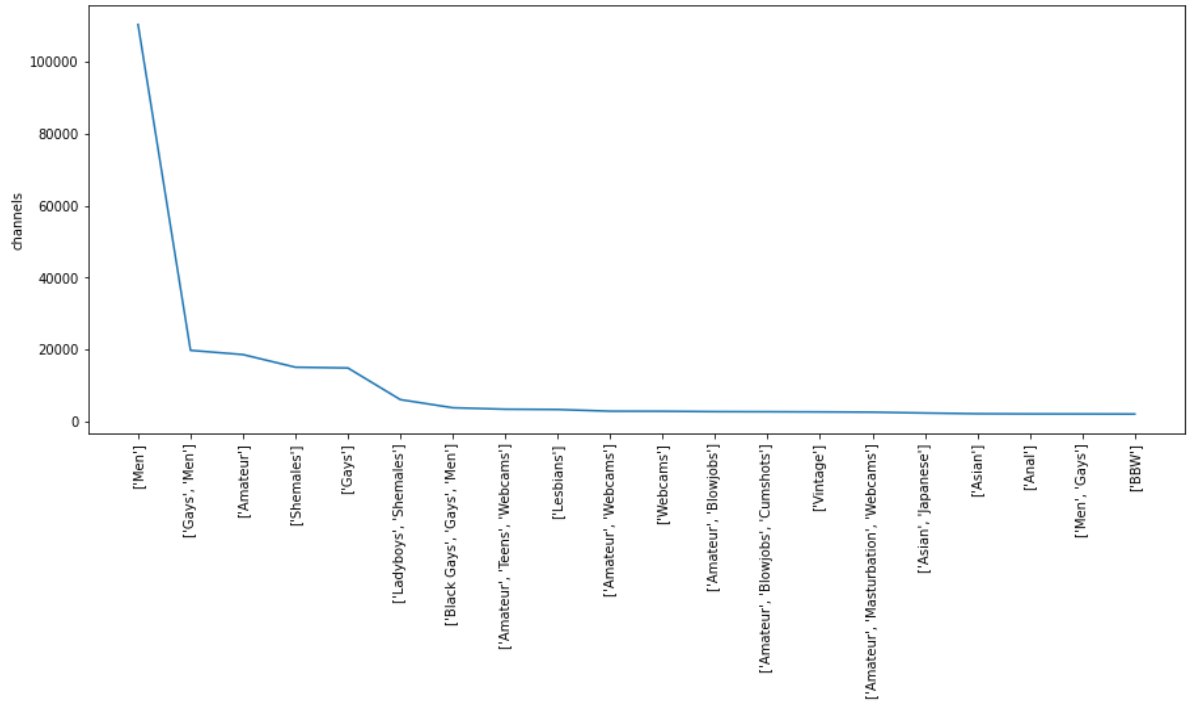
```
xhamster_channels.head()
```

Out[24]:

```
['Men']            110374
['Gays', 'Men']     19735
['Amateur']         18558
['Shemales']        15040
['Gays']            14837
Name: channels, dtype: int64
```

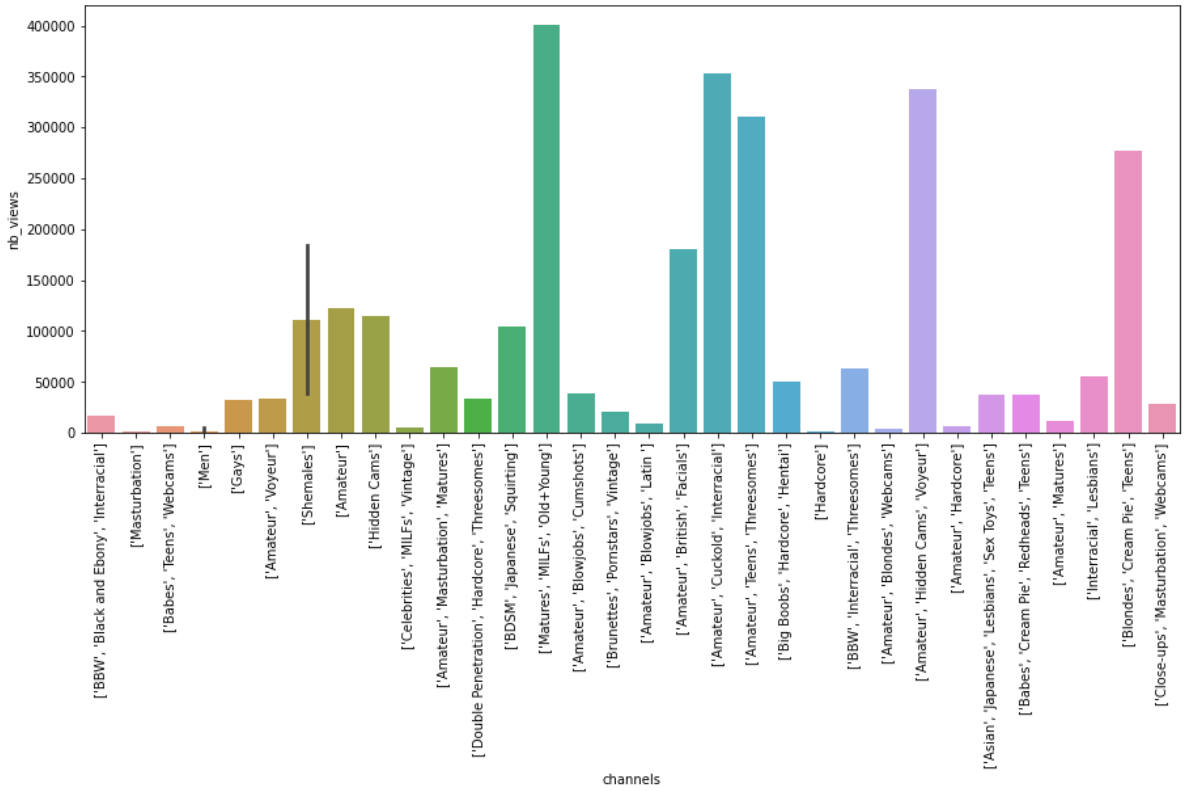
In [29]:

```
plt.figure(figsize=(15,6))
sns.lineplot(data = xhamster_channels.head(20))
plt.xticks(rotation = 90)
plt.show()
```



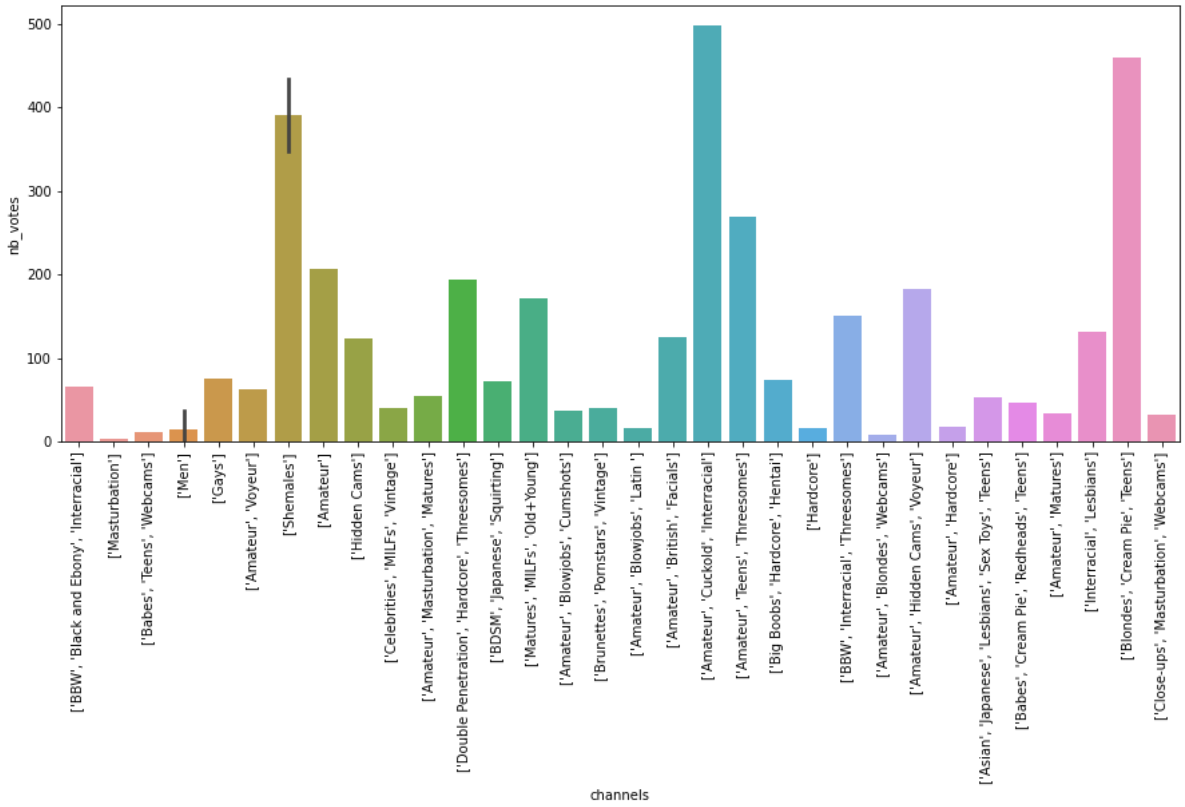
In [32]:

```
plt.figure(figsize=(15,6))
sns.barplot(x = 'channels', y = 'nb_views', data = xhamster_data.head(40))
plt.xticks(rotation = 90)
plt.show()
```



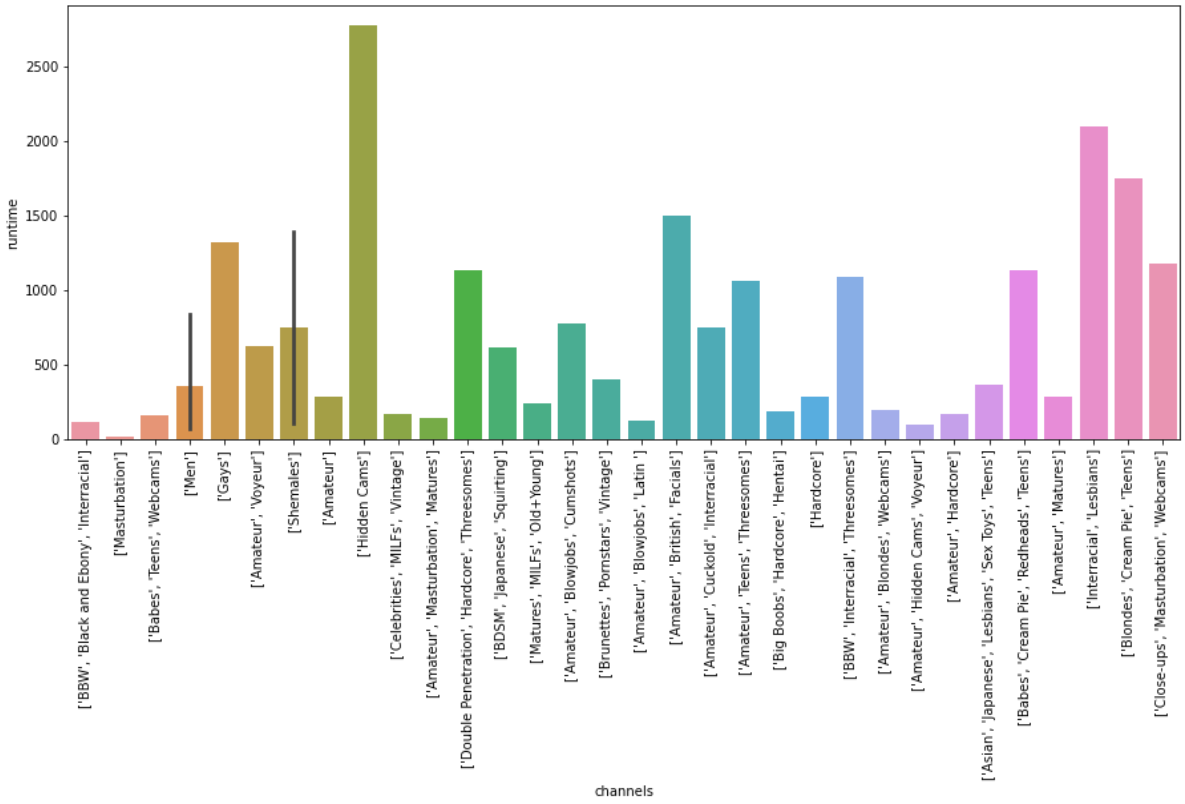
In [33]:

```
plt.figure(figsize=(15,6))
sns.barplot(x = 'channels', y = 'nb_votes', data = xhamster_data.head(40))
plt.xticks(rotation = 90)
plt.show()
```



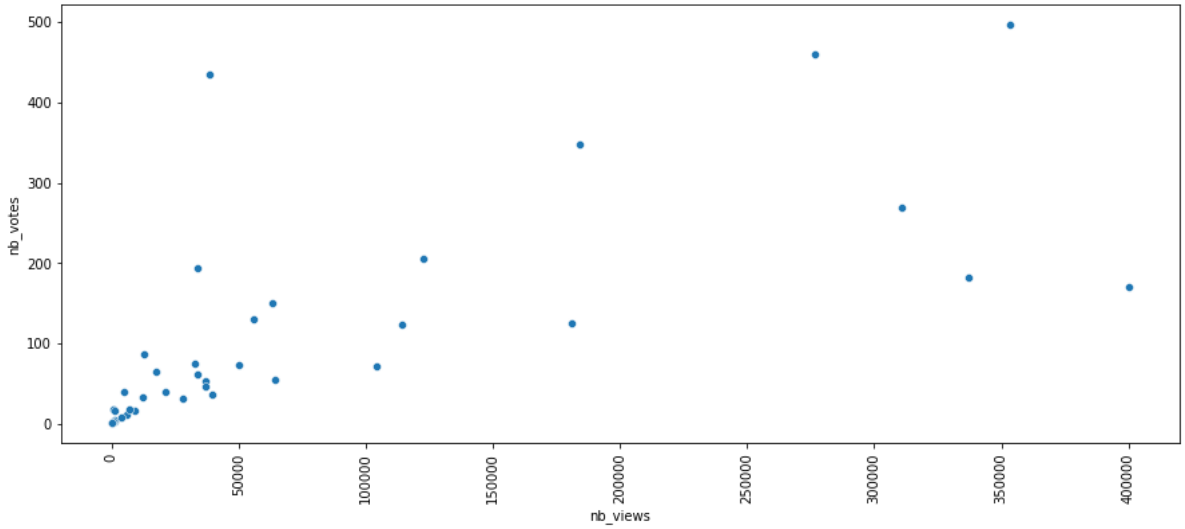
In [34]:

```
plt.figure(figsize=(15,6))
sns.barplot(x = 'channels', y = 'runtime', data = xhamster_data.head(40))
plt.xticks(rotation = 90)
plt.show()
```



In [35]:

```
plt.figure(figsize=(15,6))
sns.scatterplot(x = 'nb_views', y = 'nb_votes', data = xhamster_data.head(40))
plt.xticks(rotation = 90)
plt.show()
```



In [36]:

```
from sklearn import preprocessing
```

In [38]:

```
label_encoder = preprocessing.LabelEncoder()
```

In [39]:

```
xhamster_data['channels']= label_encoder.fit_transform(xhamster_data['channels'])
```

In [40]:

```
xhamster_data.head()
```

Out[40]:

	title	channels	nb_views	nb_votes	runtime
0	girl riding black cock	21066	17262.0	65.0	120.0
1	masturbation	52799	953.0	3.0	15.0
2	sexy horny booty dance	26948	6060.0	11.0	163.0
3	group of young bareback sportsmen d	53178	12742.0	87.0	1980.0
4	horny latinos double penetrating hot ass in a ...	46749	32879.0	75.0	1318.0

In [41]:

```
x = xhamster_data.drop(['title','nb_views'], axis = 1)
y = xhamster_data['nb_views']
```

In [42]:

```
from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(x, y, test_size = 0.33)
```

In [45]:

```
from sklearn.linear_model import LinearRegression
```

In [46]:

```
model = LinearRegression()
model.fit(X_train, y_train)
```

Out[46]:

```
LinearRegression()
```

In [47]:

```
y_pred = model.predict(X_test)
```

In [48]:

```
print("Training Accuracy :", model.score(X_train, y_train))
print("Testing Accuracy :", model.score(X_test, y_test))
```

```
Training Accuracy : 0.7362646718372391
Testing Accuracy : 0.7381458835107014
```