DataSet Kaggle

April 22, 2024

1 DataSet Kaggle

1.1 1.0 Caricamento e Visualizzazione dei Dati dei Titoli Netflix

[99]:
```
# Importa le librerie, carica il file csv nel dataframe e lo stampa
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
percorso_file_csv = "C:\\Users\\zetam\\Desktop\\2␣
 ↪Superiore\\Robotica\\netflix_titles.csv"
df = pd.read_csv(percorso_file_csv)
print(df)
```

```
     show_id     type                  title         director  \
0         s1    Movie   Dick Johnson Is Dead  Kirsten Johnson
1         s2  TV Show           Blood & Water              NaN
2         s3  TV Show               Ganglands  Julien Leclercq
3         s4  TV Show  Jailbirds New Orleans              NaN
4         s5  TV Show           Kota Factory              NaN
…       …       …                     …              …
8802   s8803    Movie                 Zodiac    David Fincher
8803   s8804  TV Show            Zombie Dumb              NaN
8804   s8805    Movie             Zombieland  Ruben Fleischer
8805   s8806    Movie                  Zoom     Peter Hewitt
8806   s8807    Movie                Zubaan      Mozez Singh

                                                  cast        country  \
0                                                  NaN  United States
1     Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban…   South Africa
2     Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi…            NaN
3                                                  NaN            NaN
4     Mayur More, Jitendra Kumar, Ranjan Raj, Alam K…          India
…                                                   …            …
8802  Mark Ruffalo, Jake Gyllenhaal, Robert Downey J…  United States
8803                                               NaN            NaN
8804  Jesse Eisenberg, Woody Harrelson, Emma Stone, …  United States
8805  Tim Allen, Courteney Cox, Chevy Chase, Kate Ma…  United States
```

```
8806  Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan…          India

              date_added  release_year rating   duration  \
0     September 25, 2021          2020  PG-13     90 min
1     September 24, 2021          2021  TV-MA  2 Seasons
2     September 24, 2021          2021  TV-MA   1 Season
3     September 24, 2021          2021  TV-MA   1 Season
4     September 24, 2021          2021  TV-MA  2 Seasons
…                    …           …    …        …
8802   November 20, 2019          2007      R    158 min
8803        July 1, 2019          2018  TV-Y7  2 Seasons
8804    November 1, 2019          2009      R     88 min
8805    January 11, 2020          2006     PG     88 min
8806       March 2, 2019          2015  TV-14    111 min

                                              listed_in  \
0                                         Documentaries
1       International TV Shows, TV Dramas, TV Mysteries
2     Crime TV Shows, International TV Shows, TV Act…
3                               Docuseries, Reality TV
4     International TV Shows, Romantic TV Shows, TV …
…                                                    …
8802                    Cult Movies, Dramas, Thrillers
8803            Kids' TV, Korean TV Shows, TV Comedies
8804                           Comedies, Horror Movies
8805                Children & Family Movies, Comedies
8806    Dramas, International Movies, Music & Musicals

                                            description
0     As her father nears the end of his life, filmm…
1     After crossing paths at a party, a Cape Town t…
2     To protect his family from a powerful drug lor…
3     Feuds, flirtations and toilet talk go down amo…
4     In a city of coaching centers known to train I…
…                                                   …
8802  A political cartoonist, a crime reporter and a…
8803  While living alone in a spooky town, a young g…
8804  Looking to survive in a world taken over by zo…
8805  Dragged from civilian life, a former superhero…
8806  A scrappy but poor boy worms his way into a ty…

[8807 rows x 12 columns]
```

1.2 1.1 Identificazione del Tipo di Programma più Frequente nei Titoli Netflix

[41]:
```
# Conta quante volte compare ogni tipo di programma e stampa quello con il␣
 ↪numero maggiore
# utilizzando il metodo idmax
import pandas as pd
percorso_file_csv = "C:\\Users\\zetam\\Desktop\\2␣
 ↪Superiore\\Robotica\\netflix_titles.csv"
df = pd.read_csv(percorso_file_csv)
tipo_programma = df['type'].value_counts().idxmax()
print(tipo_programma)
```

[41]:
```
'Movie'
```

1.3 1.2 Conteggio dei Programmi Netflix per Anno di Rilascio

[11]:
```
# Conta quanti programmi ci sono per ogni anno e stampa i numeri
import pandas as pd

anno_programma = df['release_year'].value_counts()
print(anno_programma)
```

```
release_year
2018    1147
2017    1032
2019    1030
2020     953
2016     902
        …
1959       1
1925       1
1961       1
1947       1
1966       1
Name: count, Length: 74, dtype: int64
```

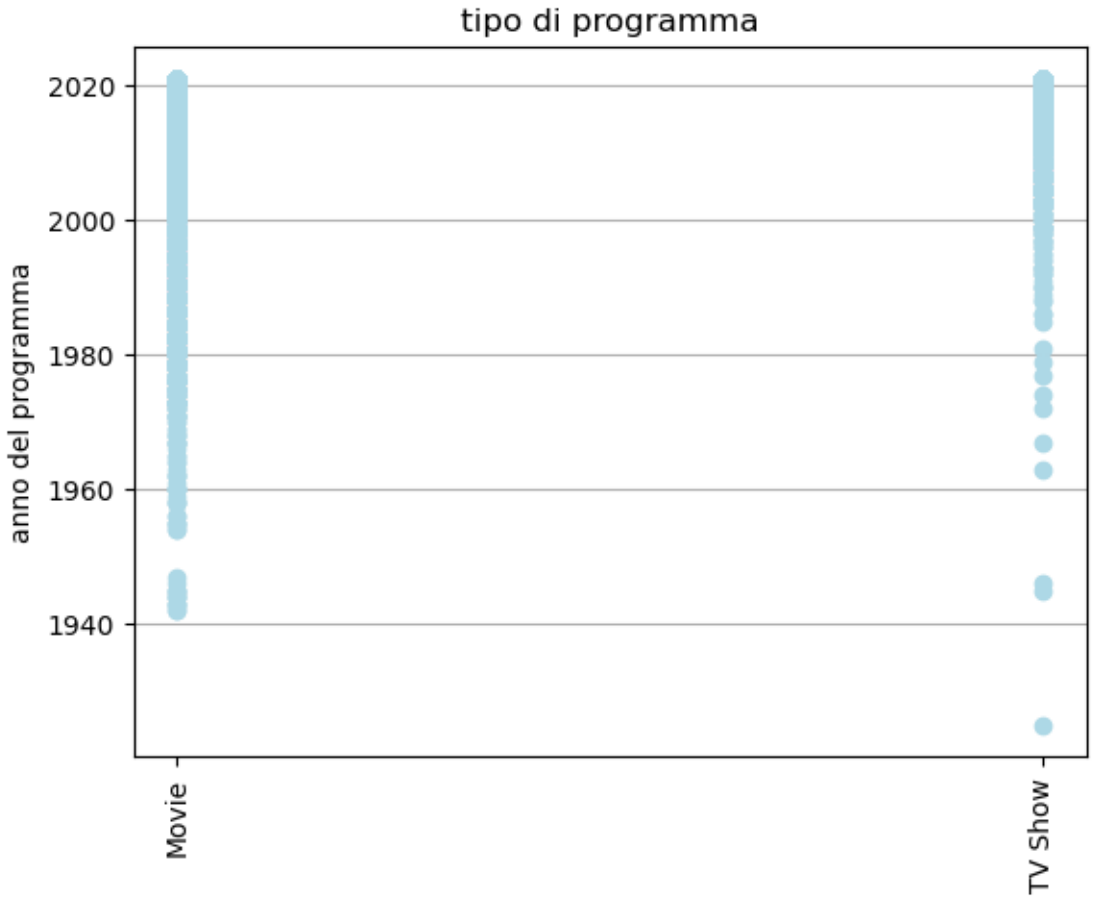
1.4 1.3 Identificazione dell'Anno con il Maggior Numero di Programmi Netflix

[12]:
```
# Conta quanti programmi ci sono per ogni anno e stampa l'anno che ne ha di più
import pandas as pd
anno_prog = df['release_year'].value_counts().idxmax()
print(anno_prog)
```

```
2018
```

1.5 1.4 Visualizzazione della Distribuzione dei Tipi di Programmi Netflix nel Corso degli Anni

[38]:
```
# Grafico a dispersione che mostra la distribuzione dei tipi di programmi negli␣
 ↪anni
import matplotlib.pyplot as plt
plt.plot(df['type'],df['release_year'], marker='o', linestyle='',␣
 ↪color='lightblue')
plt.title('tipo di programma')
plt.ylabel('anno del programma')
plt.xticks(rotation=90)
plt.grid(True, axis="y")
plt.show()
```



1.6 1.5 Identificazione e Stampa delle Righe con Valori Mancanti nel DataFrame

[40]:
```
# identifica le righe con valori mancanti e lo stampa
righe_con_dati_mancanti = df[df.isnull().any(axis=1)]
righe_con_dati_mancanti
```

[40]:

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban…	South Africa	September 24, 2021			
2	s3	TV Show	Ganglands	Julien Leclercq	Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi…	NaN	September 24, 2021			
3	s4	TV Show	Jailbirds New Orleans	NaN	NaN	NaN	September 24, 2021			
4	s5	TV Show	Kota Factory	NaN	Mayur More, Jitendra Kumar, Ranjan Raj, Alam K…	India	September 24, 2021			
…	…	…	…	…	…	…	…			
8795	s8796	TV Show	Yu-Gi-Oh! Arc-V	NaN	Mike Liscio, Emily Bauer, Billy Bob Thompson, …	Japan, Canada	May 1, 2018			
8796	s8797	TV Show	Yunus Emre	NaN	Gökhan Atalay, Payidar Tüfekçioglu, Baran Akbu…	Turkey	January 17, 2017			
8797	s8798	TV Show	Zak Storm	NaN	Michael Johnston, Jessica Gee-George, Christin…	United States, France, South Korea, Indonesia	September 13, 2018			
8800	s8801	TV Show	Zindagi Gulzar Hai	NaN	Sanam Saeed, Fawad Khan, Ayesha Omer, Mehreen …	Pakistan	December 15, 2016			
8803	s8804	TV Show	Zombie Dumb	NaN	NaN	NaN	July 1, 2019			

```
1             2021  TV-MA  2 Seasons
2             2021  TV-MA   1 Season
3             2021  TV-MA   1 Season
4             2021  TV-MA  2 Seasons
…              …     …         …
8795          2015  TV-Y7  2 Seasons
8796          2016  TV-PG  2 Seasons
8797          2016  TV-Y7  3 Seasons
8800          2012  TV-PG   1 Season
8803          2018  TV-Y7  2 Seasons

                                                listed_in  \
0                                           Documentaries
1       International TV Shows, TV Dramas, TV Mysteries
2     Crime TV Shows, International TV Shows, TV Act…
3                                 Docuseries, Reality TV
4     International TV Shows, Romantic TV Shows, TV …
…                                                     …
8795                            Anime Series, Kids' TV
8796                 International TV Shows, TV Dramas
8797                                          Kids' TV
8800  International TV Shows, Romantic TV Shows, TV …
8803             Kids' TV, Korean TV Shows, TV Comedies

                                              description
0     As her father nears the end of his life, filmm…
1     After crossing paths at a party, a Cape Town t…
2     To protect his family from a powerful drug lor…
3     Feuds, flirtations and toilet talk go down amo…
4     In a city of coaching centers known to train I…
…                                                   …
8795  Now that he's discovered the Pendulum Summonin…
8796  During the Mongol invasions, Yunus Emre leaves…
8797  Teen surfer Zak Storm is mysteriously transpor…
8800  Strong-willed, middle-class Kashaf and carefre…
8803  While living alone in a spooky town, a young g…

[3475 rows x 12 columns]
```

1.7 1.6 Calcolo e Stampa del Numero Totale di Righe con Dati Mancanti

[42]:
```
# calcola il numero totale di righe con dati mancanti e lo assegna alla␣
 ↪variabile tot_dati_mancanti e poi la stampa
alla variabile tot_dati_mancanti
tot_dati_mancanti = righe_con_dati_mancanti.shape[0]
tot_dati_mancanti
```

[42]: 3475

1.8 1.7 Identificazione e Rimozione delle Righe con Valori Mancanti dal DataFrame

[43]:
```
# identifica le righe con valori mancanti e le rimuove dal dataframe df1, poi lo stampa
df1=df.dropna(inplace=False)
df1
```

[43]:

	show_id	type	title	director	cast	country	date_added
7	s8	Movie	Sankofa	Haile Gerima	Kofi Ghanaba, Oyafunmike Ogunlano, Alexandra D…	United States, Ghana, Burkina Faso, United Kin…	September 24, 2021
8	s9	TV Show	The Great British Baking Show	Andy Devonshire	Mel Giedroyc, Sue Perkins, Mary Berry, Paul Ho…	United Kingdom	September 24, 2021
9	s10	Movie	The Starling	Theodore Melfi	Melissa McCarthy, Chris O'Dowd, Kevin Kline, T…	United States	September 24, 2021
12	s13	Movie	Je Suis Karl	Christian Schwochow	Luna Wedler, Jannis Niewöhner, Milan Peschel, …	Germany, Czech Republic	September 23, 2021
24	s25	Movie	Jeans	S. Shankar	Prashanth, Aishwarya Rai Bachchan, Sri Lakshmi…	India	September 21, 2021
…	…	…	…	…	…	…	…
8801	s8802	Movie	Zinzana	Majid Al Ansari	Ali Suliman, Saleh Bakri, Yasa, Ali Al-Jabri, …	United Arab Emirates, Jordan	March 9, 2016
8802	s8803	Movie	Zodiac	David Fincher	Mark Ruffalo, Jake Gyllenhaal, Robert Downey J…	United States	November 20, 2019
8804	s8805	Movie	Zombieland	Ruben Fleischer	Jesse Eisenberg, Woody Harrelson, Emma Stone, …	United States	November 1, 2019
8805	s8806	Movie	Zoom	Peter Hewitt	Tim Allen, Courteney Cox, Chevy Chase, Kate Ma…	United States	January 11, 2020
8806	s8807	Movie	Zubaan	Mozez Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan…		

```
8806                                                 India       March 2, 2019

      release_year rating   duration  \
7             1993  TV-MA    125 min
8             2021  TV-14  9 Seasons
9             2021  PG-13    104 min
12            2021  TV-MA    127 min
24            1998  TV-14    166 min
…              …    …         …
8801          2015  TV-MA     96 min
8802          2007      R    158 min
8804          2009      R     88 min
8805          2006     PG     88 min
8806          2015  TV-14    111 min

                                                 listed_in  \
7     Dramas, Independent Movies, International Movies
8                          British TV Shows, Reality TV
9                                     Comedies, Dramas
12                         Dramas, International Movies
24     Comedies, International Movies, Romantic Movies
…                                                     …
8801           Dramas, International Movies, Thrillers
8802                    Cult Movies, Dramas, Thrillers
8804                           Comedies, Horror Movies
8805                Children & Family Movies, Comedies
8806    Dramas, International Movies, Music & Musicals

                                               description
7     On a photo shoot in Ghana, an American model s…
8     A talented batch of amateur bakers face off in…
9     A woman adjusting to life after a loss contend…
12    After most of her family is murdered in a terr…
24    When the father of the man she loves insists t…
…                                                     …
8801  Recovering alcoholic Talal wakes up inside a s…
8802  A political cartoonist, a crime reporter and a…
8804  Looking to survive in a world taken over by zo…
8805  Dragged from civilian life, a former superhero…
8806  A scrappy but poor boy worms his way into a ty…

[5332 rows x 12 columns]
```

1.9 1.8 Creazione di una Matrice Booleana per Indicare Valori Mancanti nel DataFrame

[44]:
```
# Utilizza il metodo isnull() sul DataFrame df  per creare una matrice booleana␣
 ↪(vslori True o False)
# missing_matrix che indica se c'è un valore mancante (NaN) in ciascuna␣
 ↪posizione del DataFrame.
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
import numpy as np
missing_matrix = df.isnull()
missing_matrix
```

[44]:

	show_id	type	title	director	cast	country	date_added	\
0	False	False	False	False	True	False	False	
1	False	False	False	True	False	False	False	
2	False	False	False	False	False	True	False	
3	False	False	False	True	True	True	False	
4	False	False	False	True	False	False	False	
…	…	…	…	…	…	…	…	
8802	False	False	False	False	False	False	False	
8803	False	False	False	True	True	True	False	
8804	False	False	False	False	False	False	False	
8805	False	False	False	False	False	False	False	
8806	False	False	False	False	False	False	False	

	release_year	rating	duration	listed_in	description
0	False	False	False	False	False
1	False	False	False	False	False
2	False	False	False	False	False
3	False	False	False	False	False
4	False	False	False	False	False
…	…	…	…	…	…
8802	False	False	False	False	False
8803	False	False	False	False	False
8804	False	False	False	False	False
8805	False	False	False	False	False
8806	False	False	False	False	False

[8807 rows x 12 columns]

1.10 1.9 Selezione e Stampa dei Nomi delle Colonne Numeriche del DataFrame

[49]:
```
# selezioa le colonne del Df che contengono dati numerici e le mette nella␣
 ↪variabile numeric_cols, e poi stampa il nome delle colonne
numeric_cols = df.select_dtypes(include=['number'])
```

```
numeric_cols.columns
```

[49]:
```
Index(['release_year'], dtype='object')
```

1.11 2.0 Calcolo del Numero di Valori Mancanti per Ogni Colonna in un DataFrame

[51]:
```
# calcola il numero di valori mancanti per ogni colonna
df.isnull().sum()
```

[51]:
```
show_id            0
type               0
title              0
director        2634
cast             825
country          831
date_added        10
release_year       0
rating             4
duration           3
listed_in          0
description        0
dtype: int64
```

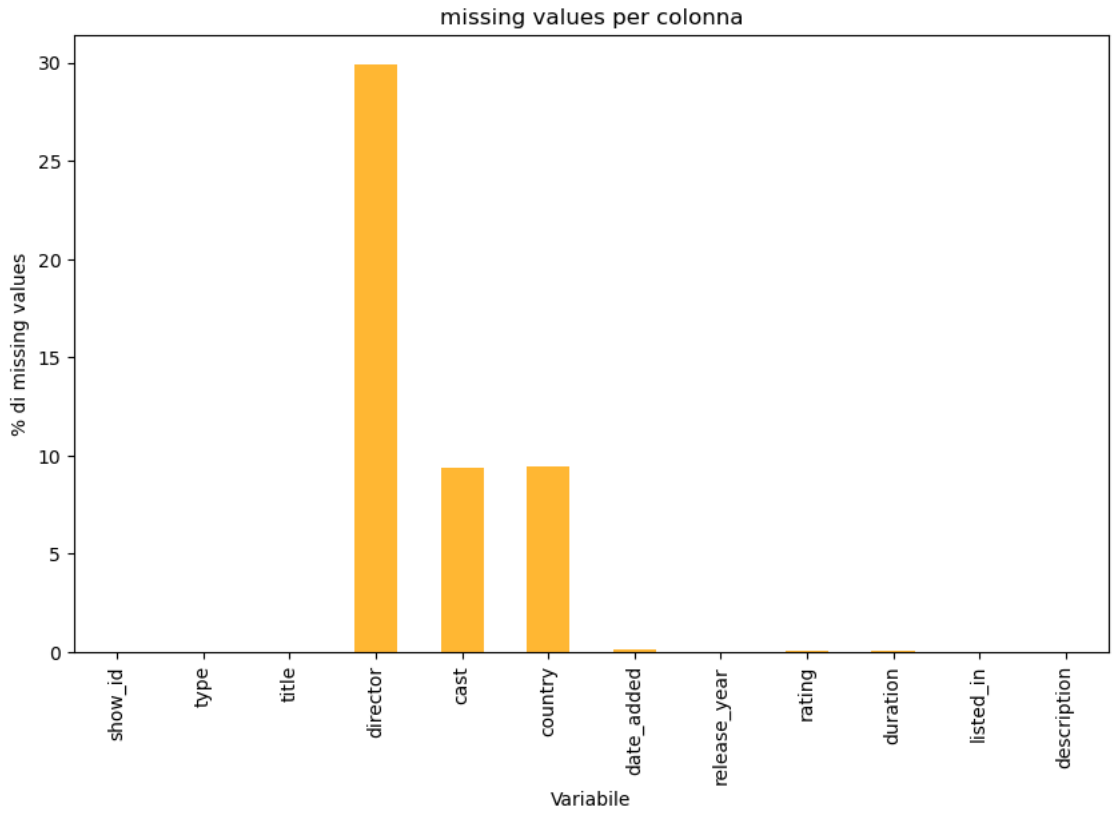
1.12 2.1 Calcolo della Percentuale di Valori Mancanti per Ogni Colonna in un DataFrame

[53]:
```
# calcola per ogni colonna la percentuale di valori mancanti su tutte le righe␣
↪del dataframe
missing_percent = df.isnull().sum() / len(df) * 100
missing_percent
```

[53]:
```
show_id          0.000000
type             0.000000
title            0.000000
director        29.908028
cast             9.367549
country          9.435676
date_added       0.113546
release_year     0.000000
rating           0.045418
duration         0.034064
listed_in        0.000000
description      0.000000
dtype: float64
```

1.13 2.2 Calcolo della Percentuale di Valori Mancanti per Ogni Colonna in un DataFrame e Creazione del Grafico a Barre Corrispondente

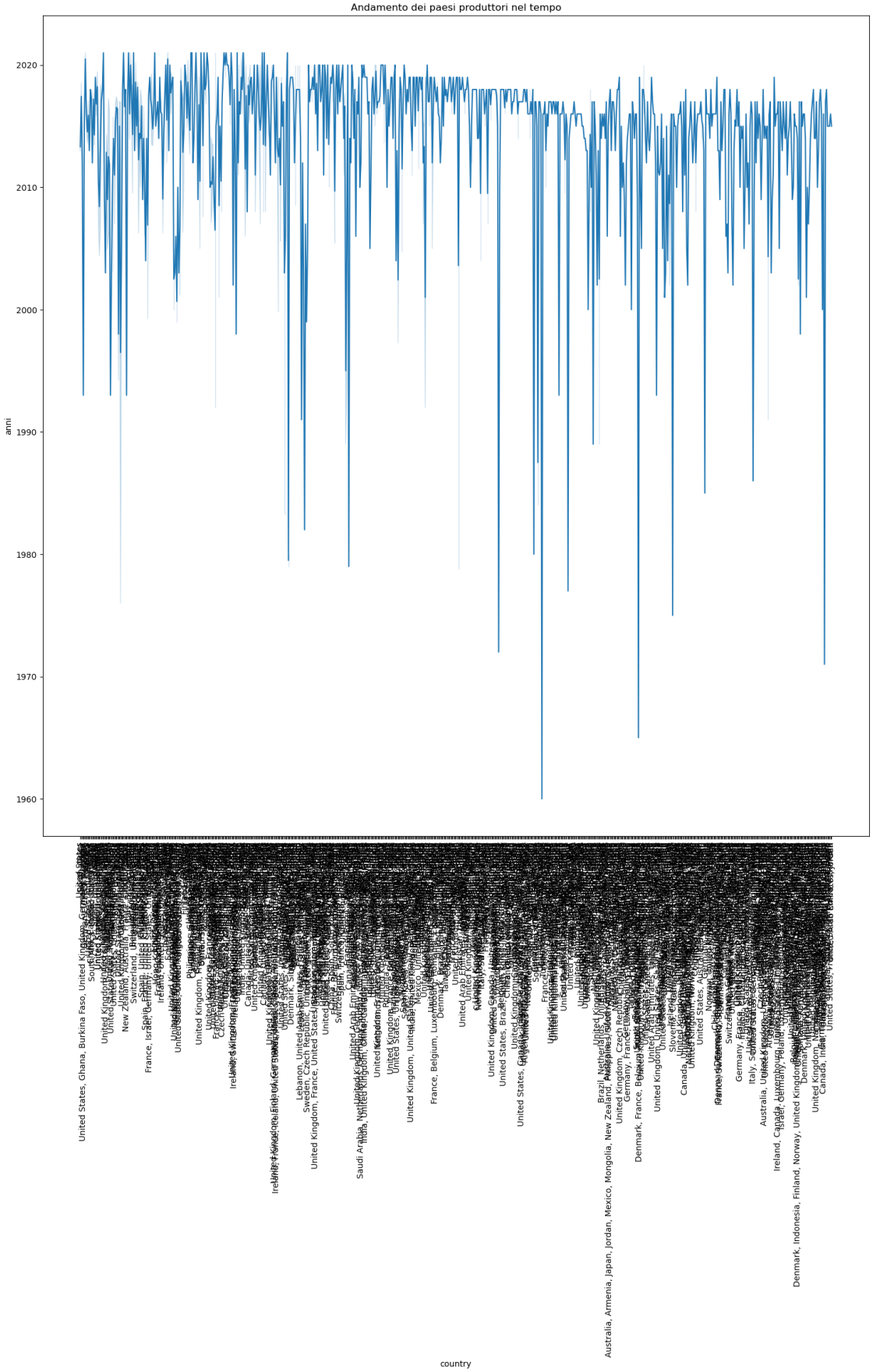
[62]:
```
# calcola per ogni colonna la percentuale di valori mancanti su tutte le righe␣
 ↪del dataframe e poi crea il grafico a barre
missing_percent= (df.isnull().sum()) / len(df) * 100
plt.figure(figsize=(10,6))
missing_percent.plot(kind='bar', color='orange', alpha=0.8)
plt.xlabel('Variabile')
plt.ylabel('% di missing values')
plt.title('missing values per colonna')
plt.xticks(rotation=90)
plt.show()
```

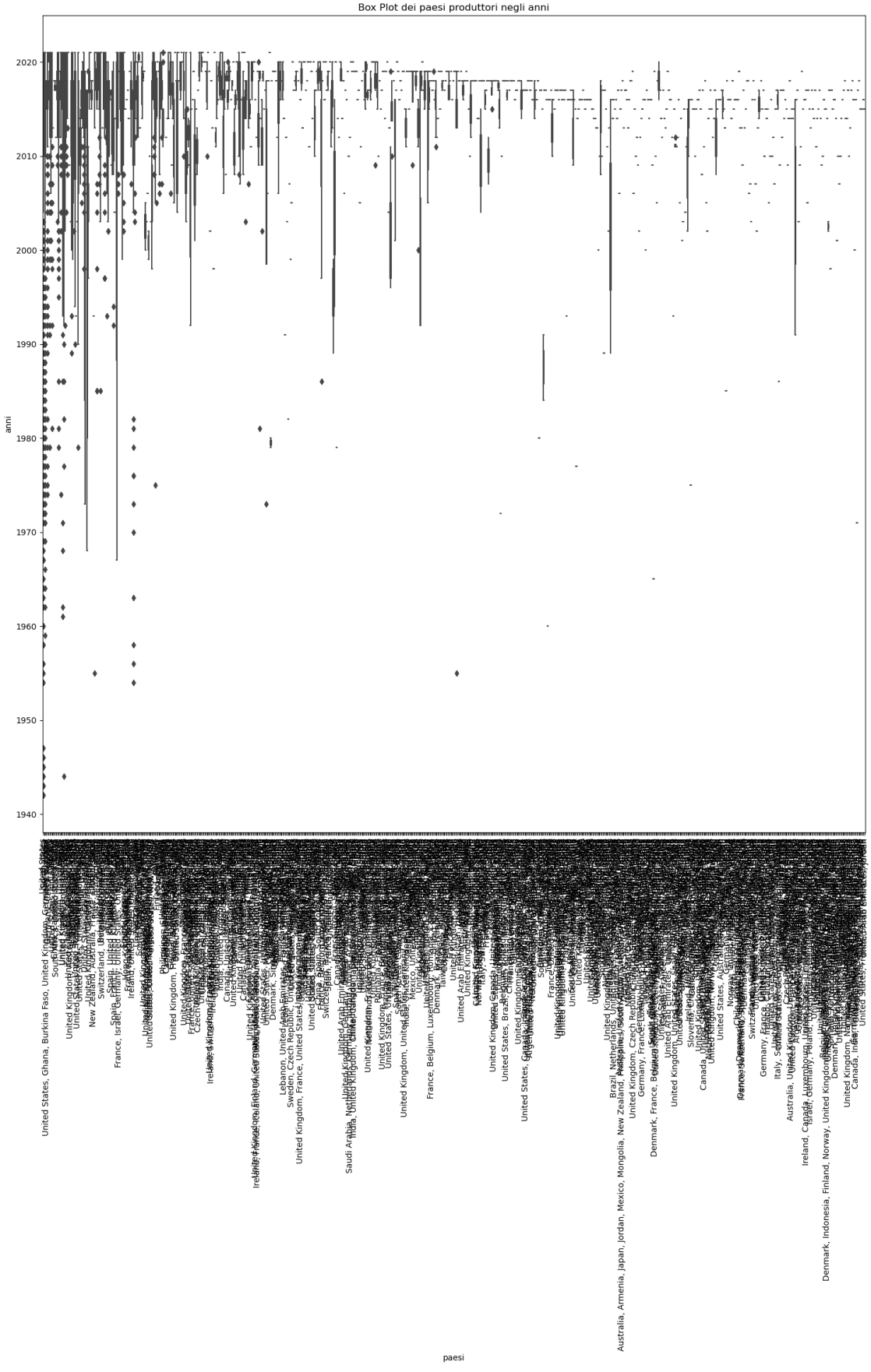


1.14 2.3 Visualizzazione dell'Andamento dei Paesi Produttori nel Tempo tramite un Grafico Lineare e un Box Plot

[66]:
```
# Visualizza un grafico dei paesi produttori nel tempo
plt.figure(figsize=(2^16, 2^16))
sns.lineplot(x='country', y='release_year', data=df)
plt.title('Andamento dei paesi produttori nel tempo')
```

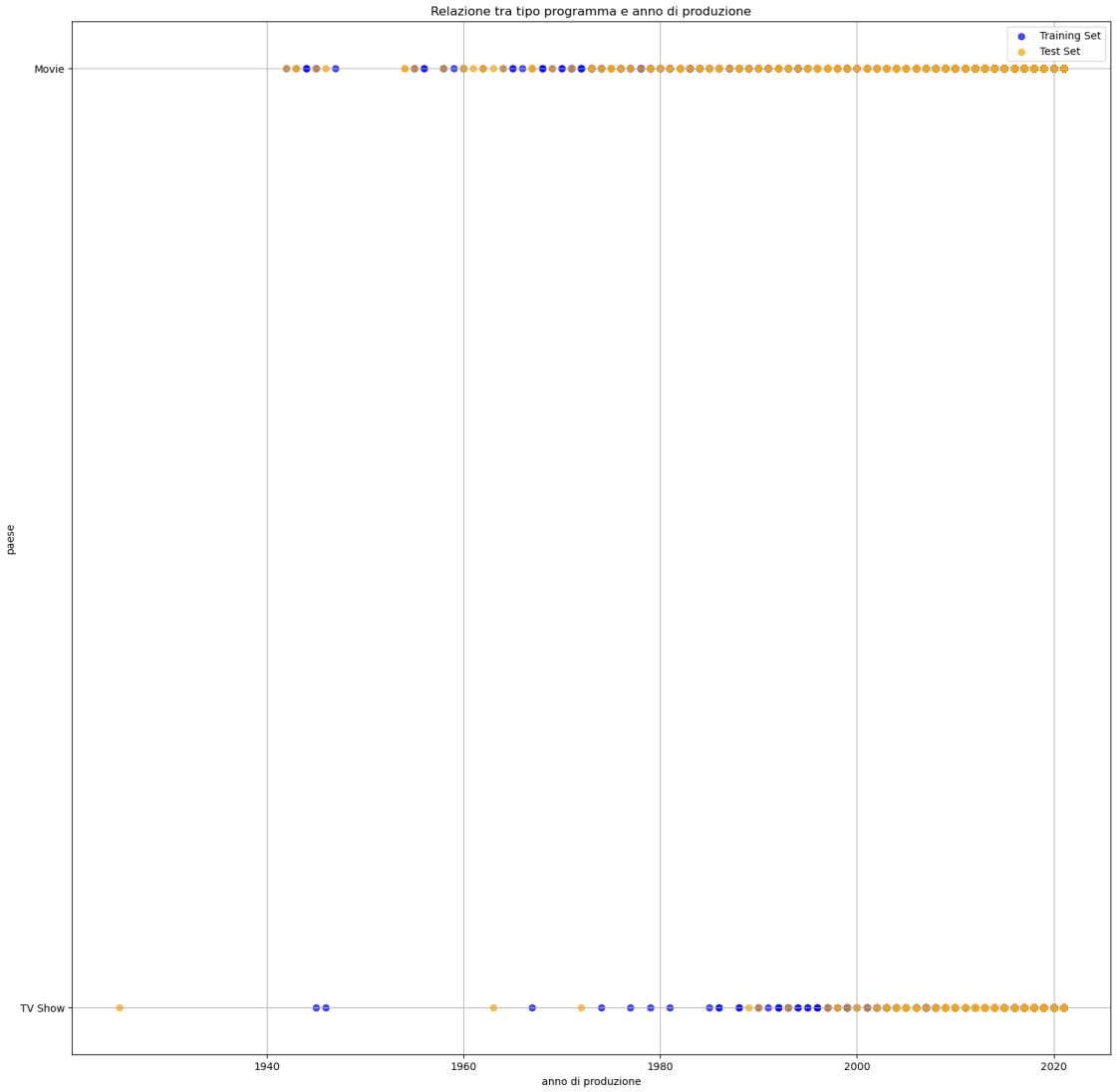
```
plt.xlabel('country')
plt.ylabel('anni')
plt.xticks(rotation=90)
plt.show()
# Visualizza una box plot dei paesi produttori nel tempo
plt.figure(figsize=(2^16, 2^16))
sns.boxplot(x='country', y='release_year', data=df)
plt.title('Box Plot dei paesi produttori negli anni')
plt.xlabel('paesi')
plt.ylabel('anni')
plt.xticks(rotation=90)
plt.show()
```


Andamento dei paesi produttori nel tempo
anni
2020
2010
2000
1990
1980
1970
1960
country


Box Plot dei paesi produttori negli anni
anni
paesi
2020
2010
2000
1990
1980
1970
1960
1950
1940

1.15 2.4 Suddivisione del Dataset in Training e Test Set, Creazione di un Grafico a Dispersione e Stampa delle Dimensioni dei Set

[70]:
```
import numpy as np
import matplotlib.pyplot as plt
from sklearn.model_selection import train_test_split
# Suddivisione del dataset in training set (70%) e test set (30%)
X_train, X_test, y_train, y_test =␣
 ↪train_test_split(df['release_year'],df['type'],test_size=0.3,␣
 ↪random_state=42)
# Creazione di un grafico a dispersione
plt.figure(figsize=(2^16, 2^16))
plt.scatter(X_train, y_train, label='Training Set', color='blue', alpha=0.7)
plt.scatter(X_test, y_test, label='Test Set', color='orange', alpha=0.7)
plt.xlabel('anno di produzione')
plt.ylabel('paese')
plt.title('Relazione tra tipo programma e anno di produzione')
plt.legend()
plt.grid(True)
plt.show()
# Stampare le dimensioni dei training set e test set
print("Dimensioni del Training Set (tipo programma e anno di produzione):
 ↪",X_train.shape, y_train.shape)
print("Dimensioni del Test Set (tipo programma e anno di produzione):",X_test.
 ↪shape, y_test.shape)
```




```
Dimensioni del Training Set (tipo programma e anno di produzione): (6164,)
(6164,)
Dimensioni del Test Set (tipo programma e anno di produzione): (2643,) (2643,)
```

1.16 2.5 Creazione di Tre Subset Casuali da un DataFrame

[100]:
```
# Creare tre subset di dimensioni simili
# primo subset: campione causale di 1/3 delle righe del df di partenza
subset1 = df.sample(frac=1/3)
# stampa il numero di righe del subset1
l1=len(subset1)
print(l1)
df = df.drop(subset1.index)
```

```
# secondo subset: campione casuale con metà delle righe rimanenti (la metà dei␣
↪2/3 rimanenti)
subset2 = df.sample(frac=1/2)
# stampa il numero di righe del subset2
l2=len(subset2)
print(l2)
df = df.drop(subset2.index)
# terzo subset: le righe restanti
subset3 = df
# stampa il numero di righe del subset3
l3=len(subset3)
print(l3)
```

```
2936
2936
2935
```

1.17 2.6 Calcolo delle Percentuali dei Valori Unici per il Paese nel Subset1

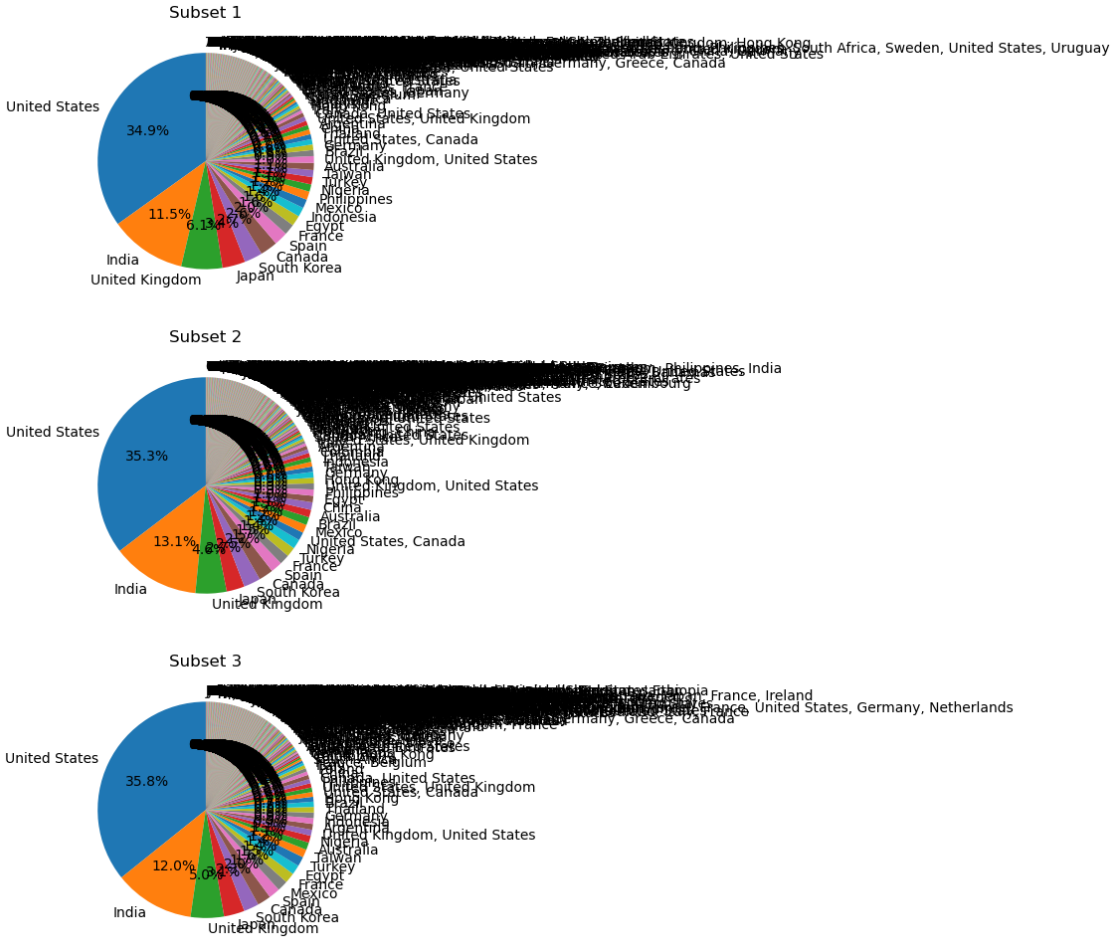
[101]:
```
percentuali_subset1 = subset1['country'].value_counts(normalize=True)
percentuali_subset1
```

[101]:
```
country
United States                                0.348907
India                                        0.114544
United Kingdom                               0.061417
Japan                                        0.034288
South Korea                                  0.027129
                                               …
Canada, Australia                            0.000377
South Korea, Canada, United States, China    0.000377
Norway, United States                        0.000377
Australia, New Zealand, United States        0.000377
Taiwan, China, France, United States         0.000377
Name: proportion, Length: 304, dtype: float64
```

1.18 2.7 Visualizzazione delle Distribuzioni dei Valori 'Country' nei Tre Subset con Grafici a Torta

[103]:
```
percentuali_subset1 = subset1['country'].value_counts(normalize=True)
percentuali_subset2 = subset2['country'].value_counts(normalize=True)
percentuali_subset3 = subset3['country'].value_counts(normalize=True)
# Creare i grafici a torta
fig, axs = plt.subplots(3, 1, figsize=(6, 12))
# Subset 1
axs[0].pie(percentuali_subset1, labels=percentuali_subset1.index, autopct='%1.
↪1f%%', startangle=90)
```

```
axs[0].set_title('Subset 1')
# Subset 2
axs[1].pie(percentuali_subset2, labels=percentuali_subset2.index, autopct='%1.
  ↪1f%%', startangle=90)
axs[1].set_title('Subset 2')
# Subset 3
axs[2].pie(percentuali_subset3, labels=percentuali_subset3.index, autopct='%1.
  ↪1f%%', startangle=90)
axs[2].set_title('Subset 3')
# Mostrare il grafico
plt.show()
```

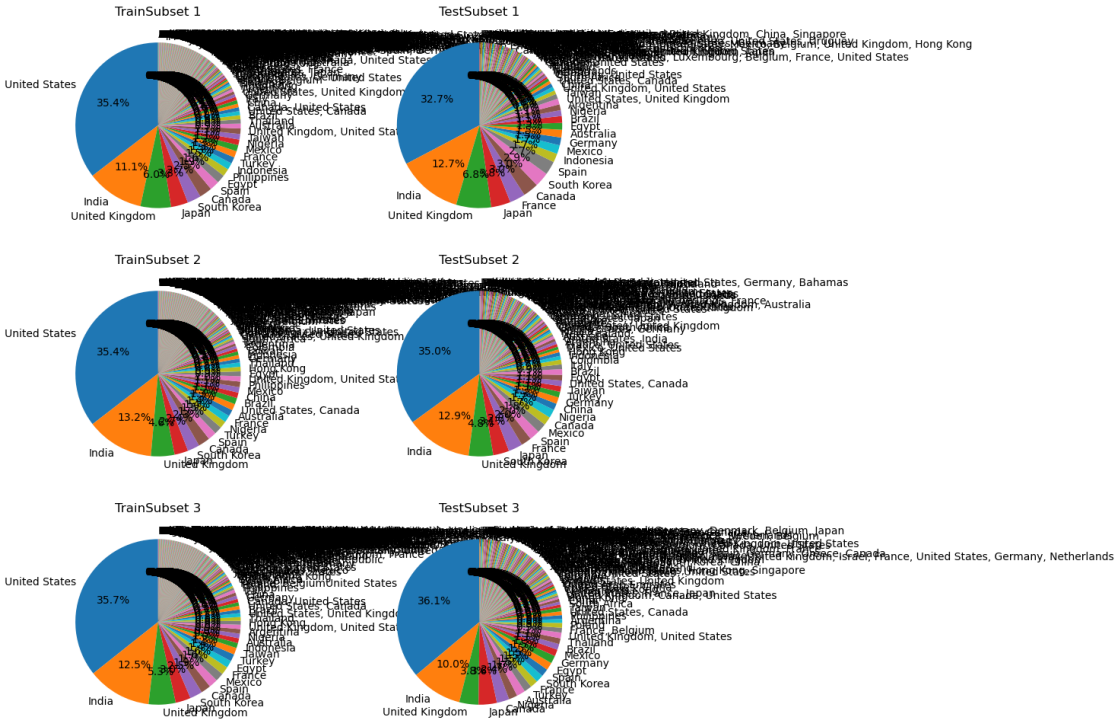


1.19 2.8 Divisione dei Subset in Training e Test Set e Visualizzazione delle Distribuzioni dei Valori 'Country' con Grafici a Torta

[108]:
```
# Dividere ciascun subset in training set e test set
train_subset1, test_subset1 = train_test_split(subset1, test_size=0.
 ↪2,random_state=42)
train_subset2, test_subset2 = train_test_split(subset2, test_size=0.
 ↪2,random_state=42)
train_subset3, test_subset3 = train_test_split(subset3, test_size=0.
 ↪2,random_state=42)
# Creare il grafico con 6 torte
fig, axs = plt.subplots(3, 2, figsize=(10, 12))
# Funzione per disegnare una torta con etichette
def draw_pie(ax, data, title):
    ax.pie(data, labels=data.index, autopct='%1.1f%%', startangle=90)
    ax.set_title(title)
# Prima riga di torte (Subset 1)
draw_pie(axs[0, 0], train_subset1['country'].value_counts(normalize=True),␣
 ↪'TrainSubset 1')

draw_pie(axs[0, 1], test_subset1['country'].value_counts(normalize=True),␣
 ↪'TestSubset 1')
# Seconda riga di torte (Subset 2)
draw_pie(axs[1, 0], train_subset2['country'].value_counts(normalize=True),␣
 ↪'TrainSubset 2')
draw_pie(axs[1, 1], test_subset2['country'].value_counts(normalize=True),␣
 ↪'TestSubset 2')
# Terza riga di torte (Subset 3)
draw_pie(axs[2, 0], train_subset3['country'].value_counts(normalize=True),␣
 ↪'TrainSubset 3')
draw_pie(axs[2, 1], test_subset3['country'].value_counts(normalize=True),␣
 ↪'TestSubset 3')
# Regolare lo spaziamento tra i subplots
plt.tight_layout()
# Mostrare il grafico
plt.show()
```

```
C:\Users\zetam\AppData\Local\Temp\ipykernel_4484\827625130.py:22: UserWarning:
Tight layout not applied. tight_layout cannot make axes width small enough to
accommodate all axes decorations
  plt.tight_layout()
```



1.20 2.9 Identificazione degli Outliers nell'Anno di Rilascio

[121]:
```
import pandas as pd
import matplotlib.pyplot as plt
# Lista con outliers da entrambi i lati
# Calcola la media e la deviazione standard
mean_value = df['release_year'].mean()
print('media anno:')
print(mean_value)
std_dev = df['release_year'].std()
print('deviazione standard:')
print(std_dev)
# Identifica gli outliers considerando ±3 * dev_std dalla media
outliers = df[(df['release_year'] > mean_value + 3 * std_dev) |␣
 ↪(df['release_year'] < mean_value - 3 * std_dev)]
outliers
```

```
media anno:
2014.2047700170358
deviazione standard:
8.581060874548479
```

[121]:
```
     show_id   type                                          title  \
 155     s156  Movie                                     Labyrinth
```

```
166     s167  Movie                    Once Upon a Time in America
529     s530  Movie                     Return of the Prodigal Son
670     s671  Movie      Mobile Suit Gundam II: Soldiers of Sorrow
1126   s1127  Movie                                  My Fair Lady
…       …    …                                          …
8569   s8570  Movie                           The Young Vagabond
8635   s8636  Movie                                    True Grit
8640   s8641  Movie                              Tunisian Victory
8660   s8661  Movie  Undercover: How to Operate Behind Enemy Lines
8739   s8740  Movie             Why We Fight: The Battle of Russia

                                          director  \
155                                    Jim Henson
166                                   Sergio Leone
529                                  Youssef Chahine
670               Yoshiyuki Tomino, Yoshikazu Yasuhiko
1126                                   George Cukor
…                                             …
8569                                    Sze Yu Lau
8635                                  Henry Hathaway
8640  Frank Capra, John Huston, Hugh Stewart, Roy Bo…
8660                                    John Ford
8739                        Frank Capra, Anatole Litvak

                                                cast  \
155   David Bowie, Jennifer Connelly, Frank Oz, Kevi…
166   Robert De Niro, James Woods, Elizabeth McGover…
529   Majida El Roumi, Souheir El Morshidy, Shoukry …
670   Toru Furuya, Shuichi Ikeda, Hirotaka Suzuoki, …
1126  Audrey Hepburn, Rex Harrison, Stanley Holloway…
…                                                   …
8569  Chia-Hui Liu, Wong Yu, Jason Pai Piao, Lung We…
8635  John Wayne, Glen Campbell, Kim Darby, Jeremy S…
8640                                 Burgess Meredith
8660                                              NaN
8739                                              NaN

                           country         date_added  release_year rating  \
155   United Kingdom, United States  September 1, 2021          1986     PG
166             Italy, United States  September 1, 2021          1984      R
529                            Egypt       July 6, 2021          1976  TV-MA
670                              NaN      June 19, 2021          1981  TV-14
1126                  United States      April 1, 2021          1964      G
…                                 …                 …           …    …
8569                      Hong Kong    August 16, 2018          1985  TV-14
8635                  United States    January 1, 2020          1969      G
8640  United States, United Kingdom     March 31, 2017          1944  TV-14
```

```
8660                 United States     March 31, 2017          1943  TV-PG
8739                 United States     March 31, 2017          1943  TV-PG

     duration                                          listed_in  \
155   101 min  Action & Adventure, Children & Family Movies, …
166   229 min                            Classic Movies, Dramas
529   124 min                       Dramas, International Movies
670   133 min  Action & Adventure, Anime Features, Internatio…
1126  173 min                  Classic Movies, Music & Musicals
…       …                                                  …
8569   85 min  Action & Adventure, Comedies, International Mo…
8635  128 min                            Classic Movies, Dramas
8640   76 min                      Classic Movies, Documentaries
8660   61 min                      Classic Movies, Documentaries
8739   82 min                                     Documentaries

                                          description
155   In Jim Henson's fantasy, teen Sarah embarks on…
166   Director Sergio Leone's sprawling crime epic f…
529   Freed after spending 12 years in jail, a man's…
670   The Earth Federation warship White Base and it…
1126  When a Cockney flower girl takes elocution les…
…                                                  …
8569  To avenge his master, a wine-loving young man …
8635  Teenage tomboy Mattie Ross enlists the help of…
8640  British and American troops join forces to lib…
8660  This World War II-era training film dramatizes…
8739  This installment of Frank Capra's acclaimed do…

[74 rows x 12 columns]
```

[ ]: