

AnalysisAndGraphs

March 23, 2024

```
[1]: import pandas as pd
import matplotlib.pyplot as plt
import numpy as np
import plotly.express as px
import seaborn as sns
import warnings
warnings.filterwarnings("ignore")
from plotnine.data import mpg
from plotnine import ggplot, aes, geom_point, geom_bar, geom_boxplot,
    ↳geom_hline, facet_grid, labs, geom_point, geom_col, stat_count,
    ↳geom_histogram, stat_density, coord_flip
from plotnine import scale_x_continuous, scale_y_continuous,
    ↳scale_colour_discrete, scale_x_reverse, scale_y_reverse, scale_color_manual,
    ↳scale_color_brewer, scale_x_discrete, scale_fill_manual
from plotnine import theme_xkcd, theme_classic, theme_light, theme,
    ↳element_blank
from plotnine import geom_text, position_stack
```

```
[3]: bucket_name = "bucketteam3"
folder = "CSV"
path="gs://{bucket_name}/{folder}/".format(bucket_name=bucket_name,
    ↳folder=folder)
```

```
[3]: df_actors = pd.read_csv(path+"actors.csv")
```

```
[9]: df_countries = pd.read_csv(path+"countries.csv")
```

```
[5]: df_crew = pd.read_csv(path+"crew.csv")
```

```
[17]: df_genres = pd.read_csv(path+"genres.csv")
```

```
[36]: df_languages = pd.read_csv(path+"languages.csv")
```

```
[4]: df_movies = pd.read_csv(path+"movies.csv")
```

```
[5]: df_releases = pd.read_csv(path+"releases.csv")
```

```
[6]: df_studios = pd.read_csv(path+"studios.csv")
```

```
[7]: df_themes = pd.read_csv(path+"themes.csv")
```

```
[10]: country_counts = df_countries.groupby('country').size().  
      ↪reset_index(name='movie_count')
```

0.0.1 Distribución del número de películas por país

```
[ ]: fig = px.choropleth(  
    country_counts,  
    locations='country',  
    locationmode='country names',  
    color='movie_count',  
    color_continuous_scale='Magma_r',  
    title='Numero de Peliculas por Pais'  
)  
  
fig.update_layout(  
    coloraxis_colorbar=dict(title='Numero de Peliculas')  
)  
  
fig.update_layout(  
    width=700,  
    height=500,  
)  
  
fig.show()
```

0.0.2 Distribución del número de películas por país (excluyendo EE. UU.)

```
[12]: filtered_country_counts = country_counts[country_counts['country'] != 'USA']  
  
fig = px.choropleth(  
    filtered_country_counts,  
    locations='country',  
    locationmode='country names',  
    color='movie_count',  
    color_continuous_scale='Magma_r',  
    title='Número de películas por país [excluyendo EE. UU.]'  
)  
fig.update_layout(  
    coloraxis_colorbar=dict(title='Number of Movies')  
)  
fig.update_layout(  

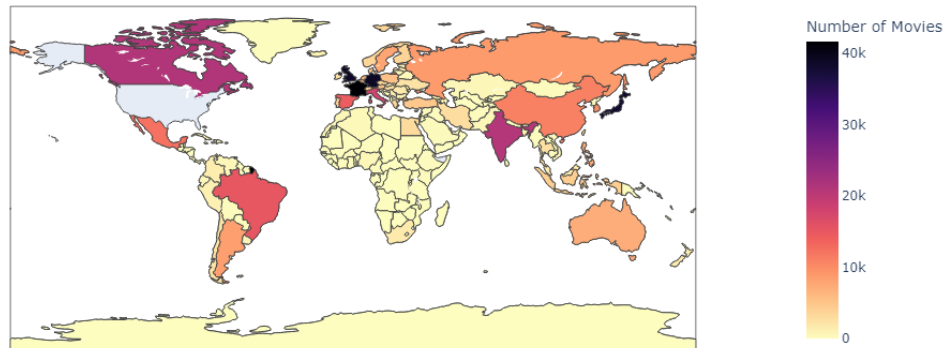
```

```

width=700,
height=500,
)
fig.show()

```

Número de películas por país [excluyendo EE. UU.]



Mapeamos Pais con Continente

```

[13]: country_to_continent = {
    'Afghanistan': 'Asia',
    'Albania': 'Europe',
    'Algeria': 'Africa',
    'American Samoa': 'Oceania',
    'Andorra': 'Europe',
    'Angola': 'Africa',
    'Anguilla': 'North America',
    'Antarctica': 'Antarctica',
    'Antigua and Barbuda': 'North America',
    'Argentina': 'South America',
    'Armenia': 'Asia',
    'Aruba': 'North America',
    'Australia': 'Oceania',
    'Austria': 'Europe',
    'Azerbaijan': 'Asia',
    'Bahamas': 'North America',
    'Bahrain': 'Asia',
    'Bangladesh': 'Asia',
    'Barbados': 'North America',
    'Belarus': 'Europe',
    'Belgium': 'Europe',

```

'Belize': 'North America',
'Benin': 'Africa',
'Bermuda': 'North America',
'Bhutan': 'Asia',
'Bolivarian Republic of Venezuela': 'South America',
'Bolivia': 'South America',
'Bosnia and Herzegovina': 'Europe',
'Botswana': 'Africa',
'Bouvet Island': 'Antarctica',
'Brazil': 'South America',
'British Indian Ocean Territory': 'Asia',
'British Virgin Islands': 'North America',
'Brunei Darussalam': 'Asia',
'Bulgaria': 'Europe',
'Burkina Faso': 'Africa',
'Burundi': 'Africa',
'Cambodia': 'Asia',
'Cameroon': 'Africa',
'Canada': 'North America',
'Cape Verde': 'Africa',
'Cayman Islands': 'North America',
'Central African Republic': 'Africa',
'Chad': 'Africa',
'Chile': 'South America',
'China': 'Asia',
'Christmas Island': 'Asia',
'Cocos (Keeling) Islands': 'Asia',
'Colombia': 'South America',
'Comoros': 'Africa',
'Congo': 'Africa',
'Cook Islands': 'Oceania',
'Costa Rica': 'North America',
'Croatia': 'Europe',
'Cuba': 'North America',
'Cyprus': 'Europe',
'Czechia': 'Europe',
'Czechoslovakia': 'Europe',
'Democratic Republic of Congo': 'Africa',
'Denmark': 'Europe',
'Djibouti': 'Africa',
'Dominica': 'North America',
'Dominican Republic': 'North America',
'East Germany': 'Europe',
'Ecuador': 'South America',
'Egypt': 'Africa',
'El Salvador': 'North America',
'Equatorial Guinea': 'Africa',

'Eritrea': 'Africa',
'Estonia': 'Europe',
'Eswatini': 'Africa',
'Ethiopia': 'Africa',
'Falkland Islands': 'South America',
'Faroe Islands': 'Europe',
'Federated States of Micronesia': 'Oceania',
'Fiji': 'Oceania',
'Finland': 'Europe',
'France': 'Europe',
'French Guiana': 'South America',
'French Polynesia': 'Oceania',
'French Southern Territories': 'Antarctica',
'Gabon': 'Africa',
'Gambia': 'Africa',
'Georgia': 'Asia',
'Germany': 'Europe',
'Ghana': 'Africa',
'Gibraltar': 'Europe',
'Greece': 'Europe',
'Greenland': 'North America',
'Grenada': 'North America',
'Guadeloupe': 'North America',
'Guam': 'Oceania',
'Guatemala': 'North America',
'Guinea': 'Africa',
'Guinea-Bissau': 'Africa',
'Guyana': 'South America',
'Haiti': 'North America',
'Heard Island and McDonald Islands': 'Antarctica',
'Honduras': 'North America',
'Hong Kong': 'Asia',
'Hungary': 'Europe',
'Iceland': 'Europe',
'India': 'Asia',
'Indonesia': 'Asia',
'Iran': 'Asia',
'Iraq': 'Asia',
'Ireland': 'Europe',
'Israel': 'Asia',
'Italy': 'Europe',
'Ivory Coast': 'Africa',
'Jamaica': 'North America',
'Japan': 'Asia',
'Jordan': 'Asia',
'Kazakhstan': 'Asia',
'Kenya': 'Africa',

'Kiribati': 'Oceania',
'Kosovo': 'Europe',
'Kuwait': 'Asia',
'Kyrgyzstan': 'Asia',
"Lao People's Democratic Republic": 'Asia',
'Latvia': 'Europe',
'Lebanon': 'Asia',
'Lesotho': 'Africa',
'Liberia': 'Africa',
'Libya': 'Africa',
'Liechtenstein': 'Europe',
'Lithuania': 'Europe',
'Luxembourg': 'Europe',
'Macao': 'Asia',
'Madagascar': 'Africa',
'Malawi': 'Africa',
'Malaysia': 'Asia',
'Maldives': 'Asia',
'Mali': 'Africa',
'Malta': 'Europe',
'Marshall Islands': 'Oceania',
'Martinique': 'North America',
'Mauritania': 'Africa',
'Mauritius': 'Africa',
'Mayotte': 'Africa',
'Mexico': 'North America',
'Monaco': 'Europe',
'Mongolia': 'Asia',
'Montenegro': 'Europe',
'Montserrat': 'North America',
'Morocco': 'Africa',
'Mozambique': 'Africa',
'Myanmar': 'Asia',
'Namibia': 'Africa',
'Nauru': 'Oceania',
'Nepal': 'Asia',
'Netherlands': 'Europe',
'Netherlands Antilles': 'North America',
'New Caledonia': 'Oceania',
'New Zealand': 'Oceania',
'Nicaragua': 'North America',
'Niger': 'Africa',
'Nigeria': 'Africa',
'Niue': 'Oceania',
'Norfolk Island': 'Oceania',
'North Korea': 'Asia',
'North Macedonia': 'Europe',

'Northern Mariana Islands': 'Oceania',
'Norway': 'Europe',
'Oman': 'Asia',
'Pakistan': 'Asia',
'Palau': 'Oceania',
'Panama': 'North America',
'Papua New Guinea': 'Oceania',
'Paraguay': 'South America',
'Peru': 'South America',
'Philippines': 'Asia',
'Pitcairn': 'Oceania',
'Poland': 'Europe',
'Portugal': 'Europe',
'Puerto Rico': 'North America',
'Qatar': 'Asia',
'Republic of Moldova': 'Europe',
'Romania': 'Europe',
'Russian Federation': 'Europe',
'Rwanda': 'Africa',
'Réunion': 'Africa',
'Saint Helena, Ascension and Tristan da Cunha': 'Africa',
'Saint Kitts and Nevis': 'North America',
'Saint Lucia': 'North America',
'Saint Pierre and Miquelon': 'North America',
'Saint Vincent and the Grenadines': 'North America',
'Samoa': 'Oceania',
'San Marino': 'Europe',
'Sao Tome and Principe': 'Africa',
'Saudi Arabia': 'Asia',
'Senegal': 'Africa',
'Serbia': 'Europe',
'Serbia and Montenegro': 'Europe',
'Seychelles': 'Africa',
'Sierra Leone': 'Africa',
'Singapore': 'Asia',
'Slovakia': 'Europe',
'Slovenia': 'Europe',
'Solomon Islands': 'Oceania',
'Somalia': 'Africa',
'South Africa': 'Africa',
'South Georgia and the South Sandwich Islands': 'Antarctica',
'South Korea': 'Asia',
'South Sudan': 'Africa',
'Spain': 'Europe',
'Sri Lanka': 'Asia',
'State of Palestine': 'Asia',
'Sudan': 'Africa',

```

'Suriname': 'South America',
'Svalbard and Jan Mayen': 'Europe',
'Sweden': 'Europe',
'Switzerland': 'Europe',
'Syrian Arab Republic': 'Asia',
'Taiwan': 'Asia',
'Tajikistan': 'Asia',
'Thailand': 'Asia',
'Timor-Leste': 'Asia',
'Togo': 'Africa',
'Tokelau': 'Oceania',
'Tonga': 'Oceania',
'Trinidad and Tobago': 'North America',
'Tunisia': 'Africa',
'Turkey': 'Asia',
'Turkmenistan': 'Asia',
'Turks and Caicos Islands': 'North America',
'Tuvalu': 'Oceania',
'UK': 'Europe',
'US Virgin Islands': 'North America',
'USA': 'North America',
'USSR': 'Europe',
'Uganda': 'Africa',
'Ukraine': 'Europe',
'United Arab Emirates': 'Asia',
'United Republic of Tanzania': 'Africa',
'United States Minor Outlying Islands': 'North America',
'Uruguay': 'South America',
'Uzbekistan': 'Asia',
'Vanuatu': 'Oceania',
'Vatican City': 'Europe',
'Vietnam': 'Asia',
'Wallis and Futuna': 'Oceania',
'Western Sahara': 'Africa',
'Yemen': 'Asia',
'Yugoslavia': 'Europe',
'Zambia': 'Africa',
'Zimbabwe': 'Africa'
}

```

```

[14]: total_movies = country_counts['movie_count'].sum()
country_counts['percentage'] = (country_counts['movie_count'] / total_movies) * 100
country_counts['continent'] = country_counts['country'].
    ↪map(country_to_continent)

```


0.0.3 Distribución de Películas por Continente

```
[15]: fig = px.sunburst(country_counts, path=['continent', 'country'],  
    ↪values='percentage',  
    title='Porcentaje de películas producidas por continente y pa  
    ↪país', hover_data={'percentage': ':.3'})  
fig.show()
```

Porcentaje de películas producidas por continente y país



0.0.4 Generos

```
[18]: df_genres.head()
```

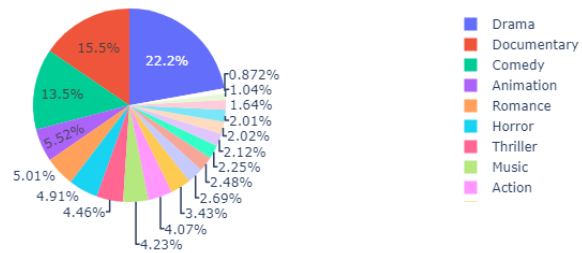
```
[18]:      id      genre  
0  1000001  Comedy  
1  1000001  Fantasy  
2  1000001  Adventure  
3  1000002  Comedy  
4  1000002  Thriller
```

```
[19]: df_countries.head()
```

```
[19]:      id      country  
0  1000001      UK  
1  1000001      USA  
2  1000002  South Korea  
3  1000003      USA  
4  1000004  Germany
```

```
[20]: genre_counts = df_genres['genre'].value_counts().reset_index()  
genre_counts.columns = ['Genre', 'Count']  
fig = px.pie(genre_counts, values='Count', names='Genre', title='Distribución  
    ↪de géneros de películas')  
fig.show()
```

Distribución de géneros de películas



```
[21]: merged_df = pd.merge(df_genres, df_countries, on='id')
grouped_df = merged_df.groupby(['country', 'genre']).size().
    ↳reset_index(name='count')
idx = grouped_df.groupby(['country'])['count'].transform(max) ==
    ↳grouped_df['count']
highest_count_genres = grouped_df[idx]
total_movies_per_country = grouped_df.groupby('country')['count'].sum()
highest_count_genres['percentage'] = highest_count_genres.apply(
    lambda row: (row['count'] / total_movies_per_country[row['country']]) * 100,
    axis=1
)
highest_count_genres['percentage'] = highest_count_genres['percentage'].round(2)
```

```
[23]: merged_df.head()
```

```
[23]:
```

	id	genre	country
0	1000001	Comedy	UK
1	1000001	Comedy	USA
2	1000001	Fantasy	UK
3	1000001	Fantasy	USA
4	1000001	Adventure	UK

```
[22]: highest_count_genres.head()
```

```
[22]:
```

	country	genre	count	percentage
5	Afghanistan	Documentary	93	47.45
20	Albania	Drama	248	43.59
39	Algeria	Drama	208	38.52
51	American Samoa	Comedy	2	40.00
58	Andorra	Drama	9	28.12

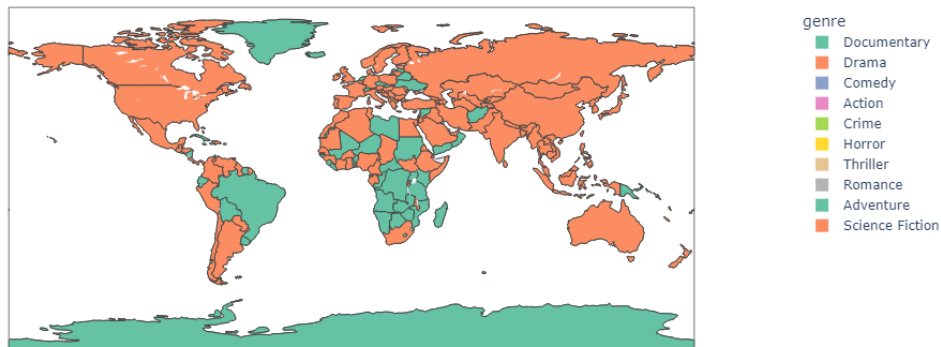
0.0.5 Género más popular por país

```
[24]: fig = px.choropleth(
        highest_count_genres,
        locations='country',
        locationmode='country names',
        color='genre',
        title='Género con mayor recuento por país',
        hover_data=['count', 'percentage'],
        color_discrete_sequence=px.colors.qualitative.Set2
    )

    fig.update_layout(
        coloraxis_colorbar=dict(title='Genre'),
        width=700,
        height=500,
    )

    fig.show()
```

Género con mayor recuento por país



```
[25]: merged_df = pd.merge(df_themes, df_countries, on='id')
        grouped_df = merged_df.groupby(['country', 'theme']).size().
            ↳reset_index(name='count')
        idx = grouped_df.groupby(['country'])['count'].transform(max) ==
            ↳grouped_df['count']
        highest_count_themes = grouped_df[idx]
        total_movies_per_country = grouped_df.groupby('country')['count'].sum()
        highest_count_themes['percentage'] = highest_count_themes.apply(
            lambda row: (row['count'] / total_movies_per_country[row['country']]) * 100,
```

```
axis=1
)
```

```
[26]: highest_count_themes.head()
```

```
[26]:
```

	country	theme	count	percentage
17	Afghanistan	War and historical adventure	3	13.043478
18	Albania	Epic history and literature	2	8.333333
22	Albania	Historical battles and epic heroism	2	8.333333
27	Albania	Military combat and heroic soldiers	2	8.333333
30	Albania	Politics and human rights	2	8.333333

```
[27]: # Elimina los duplicados manteniendo el que tiene el recuento más alto y luego
      ↪ el que tiene el nombre del tema en orden alfabético más alto.
highest_count_themes = highest_count_themes.sort_values(['country', 'count',
      ↪ 'theme'], ascending=[True, False, True]) \
      .drop_duplicates(subset=['country'])
highest_count_themes['percentage'] = highest_count_themes['percentage'].round(2)
```

```
[28]: highest_count_themes.head()
```

```
[28]:
```

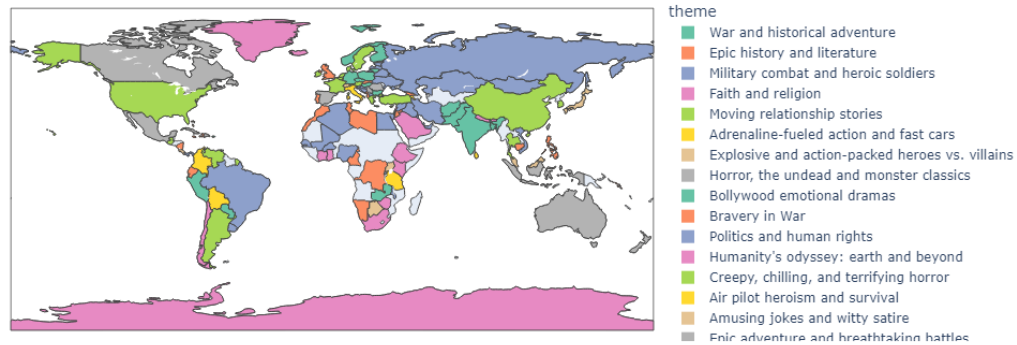
	country	theme	count	percentage
17	Afghanistan	War and historical adventure	3	13.04
18	Albania	Epic history and literature	2	8.33
43	Algeria	Military combat and heroic soldiers	3	12.50
49	Antarctica	Faith and religion	1	12.50
120	Argentina	Moving relationship stories	20	4.89

```
[29]: fig = px.choropleth(
      highest_count_themes,
      locations='country',
      locationmode='country names',
      color='theme',
      title='Temas con mayor recuento por país',
      hover_data=['count', 'percentage'],
      color_discrete_sequence=px.colors.qualitative.Set2
    )

fig.update_layout(
    coloraxis_colorbar=dict(title='Genre'),
    width=700,
    height=500,
)

fig.show()
```

Temas con mayor recuento por país



0.0.6 Releases

```
[30]: df_releases.head()
```

```
[30]:
```

	id	country	date	type	rating
0	1000001	Andorra	2023-07-21	Theatrical	NaN
1	1000001	Singapore	2023-07-20	Theatrical	PG13
2	1000001	Saudi Arabia	2023-08-10	Theatrical	NaN
3	1000001	Romania	2023-07-21	Theatrical	NaN
4	1000001	Puerto Rico	2023-12-16	TV	PG-13

0.0.7 Distribución de tipos de lanzamiento.

```
[31]: type_counts = df_releases['type'].value_counts()
fig = px.pie(type_counts, values=type_counts.values, names=type_counts.index,
             title='Distribución de tipos de lanzamiento')
fig.show()
```

Distribución de tipos de lanzamiento



0.0.8 Tipos de lanzamientos populares en todo el mundo

```
[32]: grouped_df = df_releases.groupby(['country', 'type']).size().
      ↪reset_index(name='count')
      idx = grouped_df.groupby(['country'])['count'].transform(max) ==_
      ↪grouped_df['count']
      highest_count_releases = grouped_df[idx]
      total_movies_per_country = grouped_df.groupby('country')['count'].sum()
      highest_count_releases['percentage'] = highest_count_releases.apply(
          lambda row: (row['count'] / total_movies_per_country[row['country']]) * 100,
          axis=1
      )
      highest_count_releases['percentage'] = highest_count_releases['percentage'].
      ↪round(2)
```

```
[33]: grouped_df.head()
```

```
[33]:
```

	country	type	count
0	Afghanistan	Digital	30
1	Afghanistan	Physical	14
2	Afghanistan	Premiere	8
3	Afghanistan	Theatrical	90
4	Afghanistan	Theatrical limited	3

```
[34]: fig = px.choropleth(
      highest_count_releases,
      locations='country',
      locationmode='country names',
      color='type',
      title='Tipos de lanzamiento más populares en todo el mundo',
      hover_data=['count', 'percentage'],
      color_discrete_sequence=px.colors.qualitative.Set2
  )

  fig.update_layout(
      coloraxis_colorbar=dict(title='Release Type'),
      width=700,
      height=500,
  )

  fig.show()
```

Tipos de lanzamiento más populares en todo el mundo



Parece que el tipo de estreno más popular es el cine en todo el mundo; sin embargo, ciertos países como Tayikistán (Asia Central) y ciertos países africanos: Guinea-Bissau, Uganda, Mozambique y Botswana tienen estrenos digitales como más populares.

0.0.9 Idiomas

```
[37]: df_languages.head()
```

```
[37]:      id      type language
0  1000001  Language  English
1  1000002 Primary language  Korean
2  1000002 Spoken language  English
3  1000002 Spoken language  German
4  1000002 Spoken language  Korean
```

```
[38]: #Hay 188 idiomas unicos en el dataset
merged_df = pd.merge(df_themes, df_countries, on='id')
grouped_df = merged_df.groupby(['country', 'theme']).size().
    ↪reset_index(name='count')
df_languages["language"].nunique()
```

```
[38]: 188
```

```
[39]: merged_df.head()
```

```
[39]:      id      theme country
0  1000001 Relationship comedy  UK
1  1000001 Relationship comedy  USA
2  1000001 Song and dance  UK
```

```

3  1000001          Song and dance      USA
4  1000001  Crude humor and satire      UK

```

```

[40]: merged_df = pd.merge(df_languages, df_countries, on='id')
grouped_df = merged_df.groupby(['country', 'language']).size().
    ↪reset_index(name='count')
idx = grouped_df.groupby(['country'])['count'].transform(max) ==
    ↪grouped_df['count']
highest_count_languages = grouped_df[idx]
total_movies_per_country = grouped_df.groupby('country')['count'].sum()
highest_count_languages['percentage'] = highest_count_languages.apply(
    lambda row: (row['count'] / total_movies_per_country[row['country']]) * 100,
    axis=1
)
highest_count_languages['percentage'] = highest_count_languages['percentage'].
    ↪round(2)

```

```

[41]: merged_df.head()

```

```

[41]:      id          type language      country
0  1000001      Language  English          UK
1  1000001      Language  English          USA
2  1000002  Primary language   Korean  South Korea
3  1000002  Spoken language  English  South Korea
4  1000002  Spoken language   German  South Korea

```

```

[42]: #Funcion para codigo de colores para luego usar en figura
languages = list(highest_count_languages["language"].unique())
colors = sns.color_palette("hls", len(languages))
language_colors = dict(zip(languages, colors))

def rgb_to_hex(rgb):
    """Converts an RGB tuple to hexadecimal."""
    return '%02x%02x%02x' % tuple(int(255 * x) for x in rgb)
language_colors_hex = {language: rgb_to_hex(color) for language, color in
    ↪language_colors.items()}

```

```

[43]: print(language_colors_hex)

```

```

{'Persian\\xa0(Farsi)': '#db5e56', 'Albanian': '#db6956', 'Arabic': '#db7356',
'English': '#db7e56', 'Spanish': '#db8856', 'Portuguese': '#db9256', 'Armenian':
'#db9d56', 'German': '#dba756', 'Azerbaijani': '#dbb256', 'Bengali, Bangla':
'#dbbc56', 'Russian': '#dbc756', 'French': '#dbd156', 'Dzongkha': '#dad56',
'Bosnian': '#cfd56', 'Malay': '#c5db56', 'Bulgarian': '#bad56', 'Khmer':
'#b0db56', 'Chinese': '#a5db56', 'Croatian': '#9bdb56', 'Greek\\xa0(modern)':
'#91db56', 'Czech': '#86db56', 'Danish': '#7cdb56', 'Somali': '#71db56',
'Tigrinya': '#67db56', 'Estonian': '#5cdb56', 'Amharic': '#56db5b', 'Faroese':

```



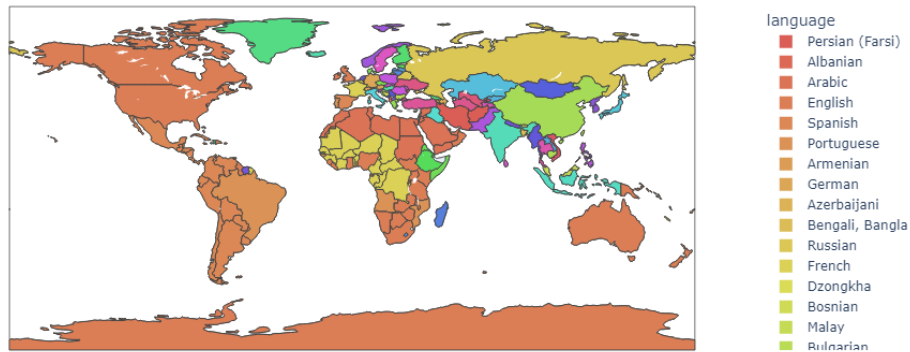
```
'#56db65', 'Finnish': '#56db70', 'Georgian': '#56db7a', 'Kalaallisut',
Greenlandic': '#56db85', 'Haitian, Haitian Creole': '#56db8f', 'Cantonese':
'#56db99', 'Hungarian': '#56dba4', 'Icelandic': '#56dbae', 'Hindi': '#56dbb9',
'Indonesian': '#56dbc3', 'Kurdish': '#56dbce', 'Hebrew\xa0(modern)': '#56dbd8',
'Italian': '#56d3db', 'Japanese': '#56c8db', 'Kazakh': '#56bedb', 'Kyrgyz':
'#56b3db', 'Lao': '#56a9db', 'Latvian': '#569fdb', 'Southern Sotho': '#5694db',
'Lithuanian': '#568adb', 'Malagasy': '#567fdb', 'Divehi, Dhivehi, Maldivian':
'#5675db', 'Marshallese': '#566adb', 'Mongolian': '#5660db', 'Serbian':
'#5756db', 'Burmese': '#6256db', 'Nepali': '#6c56db', 'Dutch': '#7756db',
'Māori': '#8156db', 'Korean': '#8c56db', 'Macedonian': '#9656db', 'Norwegian':
'#a056db', 'Urdu': '#ab56db', 'Tagalog': '#b556db', 'Polish': '#c056db',
'Romanian': '#ca56db', 'Slovak': '#d556db', 'Slovene': '#db56d6', 'Sinhalese,
Sinhala': '#db56cc', 'Swedish': '#db56c1', 'Tajik': '#db56b7', 'Thai':
'#db56ac', 'Tonga\xa0(Tonga Islands)': '#db56a2', 'Turkish': '#db5698',
'Turkmen': '#db568d', 'Ukrainian': '#db5683', 'Uzbek': '#db5678', 'Bislama':
'#db566e', 'Vietnamese': '#db5663', 'Serbo-Croatian': '#db5659'}
```

```
[44]: fig = px.choropleth(
    highest_count_languages,
    locations='country',
    locationmode='country names',
    color='language',
    title='Idiomas de películas más populares en todo el mundo',
    hover_data=['count', 'percentage'],
    color_discrete_map=language_colors_hex #Resultado de funcion
)

fig.update_layout(
    coloraxis_colorbar=dict(title='Release Type'),
    width=700,
    height=500,
)

fig.show()
```

Idiomas de películas más populares en todo el mundo



0.0.10 Studios

```
[45]: df_studios.head()
```

```
[45]:      id      studio
0  1000001  LuckyChap Entertainment
1  1000001      Heyday Films
2  1000001      NB/GG Pictures
3  1000001      Mattel
4  1000001  Warner Bros. Pictures
```

```
[46]: merged_df = pd.merge(df_studios, df_countries, on='id')
grouped_df = merged_df.groupby(['country', 'studio']).size().
    ↪reset_index(name='count')
idx = grouped_df.groupby(['country'])['count'].transform(max) ==
    ↪grouped_df['count']
highest_count_studios = grouped_df[idx]
total_movies_per_country = grouped_df.groupby('country')['count'].sum()
highest_count_studios['percentage'] = highest_count_studios.apply(
    lambda row: (row['count'] / total_movies_per_country[row['country']]) * 100,
    axis=1
)
highest_count_studios['percentage'] = highest_count_studios['percentage'].
    ↪round(2)
```

```
[47]: merged_df.head()
```

```
[47]:      id      studio country
0  1000001  LuckyChap Entertainment    UK
```

1	1000001	LuckyChap Entertainment	USA
2	1000001	Heyday Films	UK
3	1000001	Heyday Films	USA
4	1000001	NB/GG Pictures	UK

[48]: *#Reutilizamos la estructura de la funcion de arriba para los estudios.*

```
studios = list(highest_count_studios["studio"].unique())
colors = sns.color_palette("hls", len(studios))
studio_colors = dict(zip(studios, colors))

def rgb_to_hex(rgb):
    """Converts an RGB tuple to hexadecimal."""
    return '#%02x%02x%02x' % tuple(int(255 * x) for x in rgb)
studio_colors_hex = {studio: rgb_to_hex(color) for studio, color in
    ↪studio_colors.items()}
```

[49]: `print(studio_colors_hex)`

```
{'Shaheen Film': '#db5e56', 'Shqipëria e Re': '#db6056', 'Algerian Television':
'#db6156', 'Navigator Island Pictures': '#db6356', 'Arlong Productions':
'#db6456', 'Imminent Produccions': '#db6656', 'Geração 80': '#db6756',
'Continental Producciones': '#db6956', 'Department of Youth and Culture':
'#db6a56', 'Ensueño Films': '#db6c56', 'HandMade Films': '#db6d56', 'Paragon
Entertainment Corporation': '#db6f56', 'Tornasol Films': '#db7156', 'BBC':
'#db7256', 'Burning Boat Productions': '#db7456', 'Disneynature': '#db7556',
'F11 Studio': '#db7756', 'Film Victoria': '#db7856', 'Getzels Gordon
Productions': '#db7a56', 'Gumption Entertainment': '#db7b56', 'John Downer
Productions Ltd.': '#db7d56', 'Management Entertainment': '#db7e56', 'Seek
Discomfort Films': '#db8056', 'Seymour Entertainment': '#db8156', 'The Cousteau
Society': '#db8356', 'Timeline Production': '#db8456', 'Yes Theory': '#db8656',
'Hama Production': '#db8756', 'INCAA': '#db8956', 'Armenia Studio': '#db8b56',
'Millennium Media': '#db8c56', 'Screen Australia': '#db8e56', 'ORF': '#db8f56',
'Azerbaijanfilm': '#db9156', 'TinRes Entertainment': '#db9256', 'Vilper Creative
Agency': '#db9456', 'Impress Telefilm': '#db9556', 'Step by Step Productions':
'#db9756', 'Belarusfilm': '#db9856', 'RTBF': '#db9a56', 'Bennett Marine Video':
'#db9b56', 'Third Coast Productions': '#db9d56', 'Koffi Productions': '#db9e56',
'Triventure Films': '#dba056', 'HanWay Films': '#dba156', 'Centro Nacional
Autónomo de Cinematografía (CNAC)': '#dba356', 'Grupo Ukamau': '#dba556', 'SCCA
/ pro.ba': '#dba656', 'National Geographic': '#dba856', 'Globo Filmes':
'#dba956', 'Pidax Film': '#dbab56', 'British Lion Films': '#dbac56', 'Next Door
Films': '#dbae56', 'Marhain Entertainment': '#dbaf56', 'Origin Artistic':
'#dbb156', 'Boyana Film': '#dbb256', 'CNC': '#dbb456', 'Direction de la
Cinematographie Nationale': '#dbb556', 'Les Productions de la Lanterne':
'#dbb756', 'Sahélis Productions': '#dbb856', 'Burundi Film Center': '#dbba56',
'Studio MALEMME Maa asbl': '#dbbb56', 'Khemara Pictures': '#dbbd56', 'Les Films
du Raphia': '#dbbf56', 'ONF | NFB': '#dbc056', 'RTP': '#dbc256', 'Compass Light
Productions': '#dbc356', 'MAESterpiece Productions': '#dbc556', 'Revolution
```

Films': '#dbc656', 'Strike Twice Creative': '#dbc856', 'Alliance française de Bangui': '#dbc956', 'Göi-Göi Productions': '#dbcb56', 'Fabula': '#dbcc56', 'Changchun Film Studio': '#dbce56', 'Channel 4 Television': '#dbcf56', 'Department of Defense': '#dbd156', 'UNESCO': '#dbd256', 'BOGOSHORTS Film Agency': '#dbd456', 'Al Jazeera': '#dbd556', 'Aurora Films': '#dbd756', 'En Quête Prod': '#dbd956', 'HMZ Productions': '#dbda56', 'Lacoupure': '#dadb56', 'Les Films façon façon': '#d8db56', 'Pica 269': '#d7db56', 'Allison Productions': '#d5db56', 'Claude Antoine Films': '#d4db56', 'Fixer Congo': '#d2db56', 'IMAX': '#d1db56', 'Isabelle Films': '#cfd56', 'L'Office National du Cinema': '#cedb56', 'Les Films d'Ici': '#ccdb56', 'Les Films de la Passerelle': '#cbdb56', 'Lohmann Medien GmbH': '#c9db56', 'Mapa Filmes': '#c8db56', 'Max Scenars': '#c6db56', 'Polifilm': '#c5db56', 'Ryva': '#c3db56', 'Suka! Productions': '#c2db56', 'Field Theory': '#c0db56', 'Filmwork': '#bedb56', 'Imagezone (Dean Thomas)': '#bddb56', 'Imagezone (Fiona Thomas)': '#bbdb56', 'Multinesia Productions': '#badb56', 'Ngapuhi Filmworks': '#b8db56', 'The University of Hawaii at Mānoa': '#b7db56', 'Centro Costarricense de Producción Cinematográfica': '#b5db56', 'Hrvatska Radiotelevizija': '#b4db56', 'ICAIC': '#b2db56', 'A.B. Seahorse Films': '#b1db56', 'AMP Filmworks': '#afdb56', 'Česká televize': '#aedb56', 'Filmové studio Barrandov': '#acdb56', 'Nordisk Film Denmark': '#abdb56', 'A.S.A.P': '#a9db56', 'ARTE': '#a7db56', 'Canal+': '#a6db56', 'Centre du Cinéma et de l'Audiovisuel de la FWB': '#a4db56', 'Conti Films': '#a3db56', 'Coopération Belge au Développement': '#a1db56', 'Eurimages': '#a0db56', 'Les films d'en Face': '#9edb56', 'Man's Films': '#9ddb56', 'Maia Cinéma': '#9bdb56', 'Media Programme of the European Community': '#9adb56', 'Moustapha Elmi': '#98db56', 'Radiodiffusion Television Djiboutienne': '#97db56', 'Samawada Films': '#95db56', 'Vlaams Audiovisueel Fonds': '#94db56', 'ZDF': '#92db56', 'Banyan Production': '#91db56', 'Bardouille Productions': '#8fdb56', 'Deschamps Corporation': '#8ddb56', 'Documentree Films': '#8cdb56', 'Page 2 Productions': '#8adb56', 'Studio Anansi': '#89db56', 'The University of the West Indies': '#87db56', 'goPOP Films': '#86db56', 'Joendry Actor Films': '#84db56', 'DEFA': '#83db56', 'Retrogusto Films': '#81db56', 'Film Clinic': '#80db56', 'Meridiano 89': '#7edb56', 'Acige': '#7ddb56', 'BonyPictures': '#7bdb56', 'CCEM': '#7adb56', 'Centro Cultural de España en Malabo': '#78db56', 'Cotton Tree Productions': '#77db56', 'Amir Grafics': '#75db56', 'Baltic Film and Media School': '#73db56', 'Abramorama': '#72db56', 'BIP Films': '#70db56', 'Cinehollywood S.r.l.': '#6fdb56', 'DFI': '#6ddb56', 'Discovery Channel': '#6cdb56', 'Doc Society': '#6adb56', 'Fork Films': '#69db56', 'Independent Film Producers (IFP)': '#67db56', 'Intaba Creative': '#66db56', 'Loma Nasha': '#64db56', 'Original Creative Breed': '#63db56', 'Reeleyes Film': '#61db56', 'Scion Films': '#60db56', 'Shine Global': '#5edb56', 'The Bertha Foundation': '#5ddb56', 'Wah Film Productions Ltd.': '#5bdb56', 'Ethiopian Film Corporation': '#59db56', 'FITV': '#58db56', 'Santana Brothers': '#56db56', 'Super16': '#56db58', 'BE-FILMS': '#56db59', 'Big Band Story': '#56db5b', 'Palikū Documentary Films': '#56db5c', 'Angoa-Agicoa': '#56db5e', 'ITVS': '#56db5f', 'Metro-Goldwyn-Mayer': '#56db61', 'New World Disorder': '#56db62', 'PIC': '#56db64', 'PROCIREP': '#56db65', 'Pasifika Transmissions': '#56db67', 'Pictanovo': '#56db68', 'Reddy Productions': '#56db6a', 'Sacrebleu Productions': '#56db6b', 'Te Maka Productions Inc.': '#56db6d', 'Tim Bonython Productions':

'#56db6e', 'Unifocus Pictures': '#56db70', 'Wan Smolbag Theatre': '#56db72',
 'qWaves.com': '#56db73', 'YLE': '#56db75', 'Palaviré Productions': '#56db76',
 'In Vivo Prod': '#56db78', 'Fulmar West': '#56db79', 'Adélaïde Productions':
 '#56db7b', 'Ce.Na.Ci.': '#56db7c', 'Centre National du Cinema du Gabon':
 '#56db7e', 'IGIS': '#56db7f', "Société Logovéenne du Film et de l'Image Pictures
 (SLOGF)": '#56db81', 'Blue Monday Productions': '#56db82', 'Downsideup Film':
 '#56db84', 'Film Project Gambia': '#56db85', 'Gunjur Film and Drama Production':
 '#56db87', 'Gunjur Productions': '#56db88', 'Koollife Entertainment': '#56db8a',
 'Lotus-Film': '#56db8c', 'Nomad Earth Media': '#56db8d', 'Nowness': '#56db8f',
 'Young Stars Movie Production': '#56db90', 'dfm Fiktion': '#56db92',
 'Georgianfilm': '#56db93', 'Obibini Pictures': '#56db95', 'Aderyn Productions':
 '#56db96', 'Audio Visual Enterprises': '#56db98', 'Craig T. Rumar Productions':
 '#56db99', 'Mulloway Limited': '#56db9b', 'Serra & Becerra Productions':
 '#56db9c', 'Warner Bros. Pictures': '#56db9e', 'Greek Film Centre': '#56db9f',
 'NukkiNukki Productions': '#56dba1', 'Mirror and Hammer Films': '#56dba2',
 'Quarless Video Concepts': '#56dba4', 'Caraibe Films Compagnie': '#56dba6',
 'Project: Inspire': '#56dba7', 'Casa Comal': '#56dba9', 'Cinematografica Tikal':
 '#56dbaa', 'Arco Iris': '#56dbac', 'LX Filmes': '#56dbad', "Les Films de
 l'Après-Midi": '#56dbaf', 'Spectre Productions': '#56dbb0', 'Guyana
 Entertainment': '#56dbb2', 'Mahadeo Shivraj Productions': '#56dbb3', 'Nivelli
 International': '#56dbb5', 'The Victor Jara Collective': '#56dbb6', 'Whitehorse
 Films': '#56dbb8', 'Astrolabio': '#56dbb9', 'Cinematoteca Universitaria Enrique
 Ponce Garay': '#56dbbb', 'Shaw Brothers': '#56dbbd', 'Mafilm': '#56dbbe', 'RÚV':
 '#56dbc0', 'SVF Entertainment': '#56dbc1', 'Starvision Plus': '#56dbc3',
 'Kanoon': '#56dbc4', 'Iraqi Cinema and Theater Foundation': '#56dbc6', 'Fís
 Éireann/Screen Ireland': '#56dbc7', 'United King Films': '#56dbc9', 'RAI':
 '#56dbca', 'Abyssa Films': '#56dbcc', 'Toei Company': '#56dbcd', 'Baalbek
 studio': '#56dbcf', 'Sooraj': '#56dbd0', 'Kazakhfilm Studios': '#56dbd2', 'One
 Fine Day Films': '#56dbd3', 'Ironbound Films': '#56dbd5', 'OneMinutesJr':
 '#56dbd7', 'Phoenix Islands Protected Area': '#56dbd8', 'Television Trust for
 the Environment': '#56dbda', 'Qendra Kinematografike e Kosovës': '#56dadb',
 '': '#56d9db', 'Kyrgyzfilm': '#56d7db', 'Lao
 New Wave Cinema Productions': '#56d6db', 'Latvijas Kultūras akadēmija':
 '#56d4db', 'Abbout Productions': '#56d3db', 'Day Zero Film and Video':
 '#56d1db', 'Mokoari Street': '#56d0db', 'A Tarr worryonwon company': '#56cedb',
 'Appian Way': '#56cddb', 'Big World Cinema': '#56cbdb', 'Bold Films': '#56cadb',
 'Docster': '#56c8db', 'DoubleH Entertainment': '#56c7db', 'Fox Tale Films':
 '#56c5db', 'Fusion Productions': '#56c4db', 'Gabriel Films': '#56c2db', 'Ink &
 Pepper': '#56c0db', 'Just Media': '#56bfdb', 'Lunar Films': '#56bddb', 'Mami
 Wata Pekin Productions': '#56bcd b', 'Nine Stories Productions': '#56badb',
 'Obrigado Productions': '#56b9db', 'RYOT Films': '#56b7db', 'SVT': '#56b6db',
 'Unity Film Productions': '#56b4db', 'Vision Film Company': '#56b3db', 'Vulcan
 Productions': '#56b1db', 'Filmco International Productions': '#56b0db', 'Michael
 Arthur Films': '#56aedb', 'Prodif Ets.': '#56ad db', 'Lithuanian Academy of Music
 and Theatre': '#56abdb', 'Samsa Film': '#56aadb', 'Pontus Maximus Productions':
 '#56a8db', 'Laterit Productions': '#56a6db', 'BAM Studios': '#56a5db', 'BBC
 Film': '#56a3db', 'BFI': '#56a2db', 'First Dawn Arts': '#56a0db', 'Freedom From
 Fistula Foundation': '#569fdb', 'Group Theory': '#569ddb', 'Ken Anderson Films':

'#569cdb', 'Makropol': '#569adb', 'Participant': '#5699db', 'Potboiler
 Productions': '#5697db', 'Purple Field Productions': '#5696db', 'Satellite
 Entertainment': '#5694db', 'Satellite multimedia': '#5693db', 'Vertical Ascent':
 '#5691db', 'Astro Shaw': '#5690db', 'Dark Rain Entertainment': '#568edb', 'Les
 Films Cissé': '#568cdb', 'Latina Pictures': '#568bdb', 'Microwave Films':
 '#5689db', 'R.F.O.': '#5688db', 'Les Films Soleil O': '#5686db', 'Caméléon
 Production': '#5685db', 'Vice-Rectorat de Mayotte': '#5683db', 'Instituto
 Mexicano de Cinematografía': '#5682db', 'Association pour la Création
 Cinématographique de Monaco': '#5680db', 'Check Productions': '#567fdb', 'France
 2 Cinéma': '#567ddb', 'Mongolkino': '#567cdb', 'Radiotelevizija Crne Gore':
 '#567adb', 'Living Letters Productions': '#5679db', 'University of Pittsburgh':
 '#5677db', 'Centre Cinématographique Marocain': '#5676db', 'Ébano Multimédia':
 '#5674db', 'Triple Six Movie Production': '#5672db', 'Collective Productions
 Namibia': '#5671db', 'The Commonwealth Film Unit': '#566fdb', 'Shital shijan
 Digital Pvt Ltd': '#566edb', 'VPRO': '#566cdb', 'A-Film Distribution':
 '#566bdb', 'A-Film Home Entertainment': '#5669db', 'Blaq Out': '#5668db',
 'CCCP': '#5666db', 'CG Entertainment': '#5665db', 'CZAR Belgium': '#5663db',
 'Camera Obscura': '#5662db', 'Cosmic Illusion Productions': '#5660db', 'FishEye
 Feature Films': '#565fdb', 'Independent Theatre Foundation St. Martin':
 '#565ddb', 'Inspire Pictures': '#565cdb', 'L'Altrofilm': '#565adb', 'Legend
 Films International': '#5658db', 'Manteka Studios': '#5657db', 'Mercurio
 Cinematografica': '#5756db', 'Metro Tartan Distribution Ltd.': '#5956db',
 'Palisades Tartan': '#5a56db', 'Pietra Production Films': '#5c56db', 'Provider
 Films': '#5d56db', 'Siren Visual Entertainment': '#5f56db', 'Storytellers Film &
 TV': '#6056db', 'The Netherlands Information Bureau': '#6256db', 'United
 Artists': '#6356db', 'symbol productions': '#6556db', 'New Zealand Film
 Commission': '#6656db', 'Instituto Nicaraguense de Cine (INCINE)': '#6856db',
 'Cabas Film': '#6956db', 'Iroko Films': '#6b56db', 'University of Waikato':
 '#6c56db', 'Eye Design Films': '#6e56db', 'Korean Film': '#6f56db', 'Makedonska
 Televizija': '#7156db', 'D&R Visuals': '#7356db', 'Kitty Films': '#7456db',
 'Open Boat Film': '#7656db', 'Sisbro Studio': '#7756db', 'Norsk Film':
 '#7956db', 'AVRO Television': '#7a56db', 'Cassette for Timescapes': '#7c56db',
 'Film Solutions': '#7d56db', 'IDTV Film': '#7f56db', 'Nebula Productions':
 '#8056db', 'Oman Art Production Company': '#8256db', 'Oman Film & Theatre
 Society': '#8356db', 'Oman Film Society': '#8556db', 'Required Reading
 Productions': '#8656db', 'Sharjah Art Foundation': '#8856db', '7th Sky
 Entertainment': '#8a56db', 'Momina Duraid Productions': '#8b56db', 'Jaguar
 Films': '#8d56db', 'Institute of Papua New Guinea Studios': '#8e56db', 'Sabaté
 Films': '#9056db', 'Tondero': '#9156db', 'Viva Films': '#9356db', 'Kinomachina':
 '#9456db', 'PWSFTviT': '#9656db', 'TVP': '#9756db', 'Divedco': '#9956db', 'Film
 Unit of the Division of Community Education, Puerto Rico': '#9a56db', 'Simpals':
 '#9c56db', 'Studioul Cinematografic București': '#9d56db', 'CTB Film Company':
 '#9f56db', 'Almond Tree Films': '#a056db', 'A Private View': '#a256db', 'Bobi
 Lux': '#a456db', 'C.L.A.P.': '#a556db', 'Calren Studios': '#a756db', 'Film i
 Väst': '#a856db', 'La Cerise Sur Le Gâteau': '#aa56db', 'Latzel film- & tv-
 prduction': '#ab56db', 'Le Fresnoy': '#ad56db', 'Lemming Film': '#ae56db', 'Les
 Films du Haut d'un Arbre': '#b056db', 'Lithops Films': '#b156db', 'Ludwig
 Kameraverleih': '#b356db', 'Plattform Produktion': '#b456db', 'Région Réunion':

'#b656db', 'Tala Media': '#b756db', 'Tiktak Production': '#b956db', 'VMP Films':
 '#ba56db', 'We Film': '#bc56db', 'trust your ears': '#be56db', 'Granada
 Television': '#bf56db', 'Warner Sisters Productions': '#c156db', 'Wendover
 Productions': '#c256db', 'MSR Media': '#c456db', 'Allbiz': '#c556db', 'Iland Boy
 Films': '#c756db', 'Natural Groove Pictures': '#c856db', 'Nexus Networks':
 '#ca56db', 'Untold Stories': '#cb56db', 'Video Associates': '#cd56db', 'Warwick
 Productions': '#ce56db', 'Wiseman Media': '#d056db', 'Cinémaginaire': '#d156db',
 'Epithète films': '#d356db', 'France 3 Cinéma': '#d456db', 'Pierre Films':
 '#d656db', 'Red Ochre Productions': '#d856db', 'SODEC': '#d956db', 'Société
 Radio-Canada': '#db56db', 'Téléfilm Canada': '#db56d9', 'Wavelight Productions':
 '#db56d8', 'Shadowhand Productions': '#db56d6', 'Blueskin Films': '#db56d5',
 'm2s1 films': '#db56d3', 'CINEPHIL San Marino': '#db56d2', 'Cooperativa
 Mmezzogiorno Nuovo D'Italia': '#db56d0', 'Instituzione della Cinema di San
 Marino': '#db56cf', 'BNK Best Movies': '#db56cd', 'Telfaz11': '#db56cc',
 'Almadies Films': '#db56ca', 'Cinekap': '#db56c9', 'Fakultet Dramskih Umetnosti
 Beograd (FDU)': '#db56c7', 'Radiotelevizija Beograd': '#db56c6', 'Puzzle Piece
 Productions': '#db56c4', 'Radio Television Seychelles': '#db56c3', 'SBC':
 '#db56c1', 'Braddock Films': '#db56bf', 'Do Global Productions': '#db56be',
 'Jimmy Bangura Group': '#db56bc', 'King J Media Production': '#db56bb',
 'Paradise Films': '#db56b9', 'Photo Planet': '#db56b8', 'The Freetown Media
 Center': '#db56b6', 'Try Hard Films': '#db56b5', 'WLIW New York': '#db56b3',
 'WeOwnTV': '#db56b2', 'Malay Film Productions Ltd.': '#db56b0', 'RTVS':
 '#db56af', 'RTV Slovenija': '#db56ad', 'Day's Edge Productions': '#db56ac',
 'Dreamcast Theater Solomon Islands': '#db56aa', 'Jackhead': '#db56a9', 'OMS Film
 Group': '#db56a7', 'Sukwadi Media': '#db56a5', 'Wantok Stori': '#db56a4',
 'Distant Horizon': '#db56a2', 'Untitled Film Works': '#db56a1', 'CJ
 Entertainment': '#db569f', 'Weltfilm': '#db569e', 'TVE': '#db569c', 'Cine-
 FilmsLanka': '#db569b', 'Maharaja Entertainments (Pvt.) Ltd': '#db5699',
 'Philistine Films': '#db5698', 'The Back Lot Foundation': '#db5696', 'Aurora
 Filmlyd': '#db5695', 'C.R.I.M. Produções': '#db5693', 'SRF': '#db5692', 'Komîna
 Fîlm a Rojava': '#db5690', 'Central Motion Picture Corporation': '#db568f',
 'Tajikfilm': '#db568d', 'Sahamongkolfilm': '#db568b', 'FairTrade Films':
 '#db568a', 'Amanou Production': '#db5688', 'New Zealand National Film Unit':
 '#db5687', 'Malosi Pictures': '#db5685', 'Escuela Internacional de Cine y
 Televisión (EICTV)': '#db5684', 'Fundación del Nuevo Cine Latinoamericano':
 '#db5682', 'Ciné-téléfilms': '#db5681', 'Erler Film': '#db567f', 'Turkmenfilm':
 '#db567e', 'Regent Entertainment': '#db567c', 'HesseGreutert Film': '#db567b',
 'Mare Imbrium': '#db5679', 'Savannah College of Art and Design': '#db5678',
 'American Film Institute (AFI)': '#db5676', 'Garza Films': '#db5674', 'U.C.E.
 Productions': '#db5673', 'Varna Films': '#db5671', 'Mosfilm': '#db5670', 'Ramon
 Film Productions': '#db566e', 'Ukranimafilm': '#db566d', 'Imagenation Abu Dhabi
 FZ': '#db566b', 'Kijiweni Productions': '#db566a', 'Cedarlark': '#db5668',
 'RTL': '#db5667', 'Imágenes (Uy)': '#db5665', 'Uzbekfilm': '#db5664', 'Wan
 Smolbag Films': '#db5662', 'Centro Televisivo Vaticano': '#db5661', 'Hãng Phim
 Truyện Việt Nam': '#db565f', 'France 3': '#db565e', 'France Télévisions':
 '#db565c', 'Mérapi Productions': '#db565a', 'Wallis et Futuna 1ere': '#db5659',
 'Prominent Television': '#db5657', 'Adenium Productions': '#db5756', 'Avala
 Film': '#db5856', 'EK Films': '#db5a56', 'JBA Production': '#db5b56', 'Nyerai

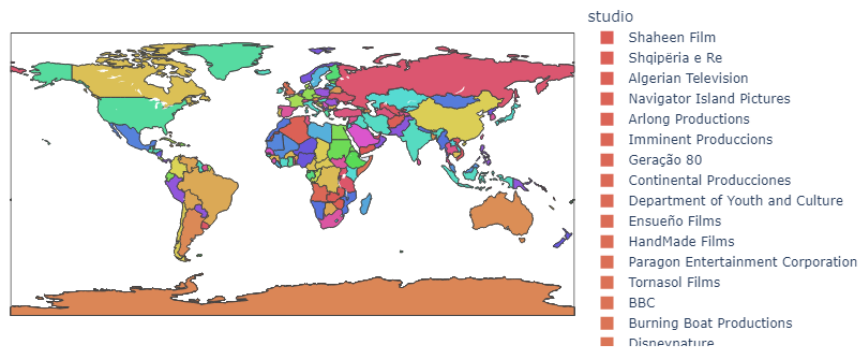
```
Films': '#db5d56']}
```

```
[50]: fig = px.choropleth(
        highest_count_studios,
        locations='country',
        locationmode='country names',
        color='studio',
        title='Los estudios más populares del mundo',
        hover_data=['count', 'percentage'],
        color_discrete_map=studio_colors_hex
    )

    fig.update_layout(
        coloraxis_colorbar=dict(title='Studio'),
        width=700,
        height=500,
    )

    fig.show()
```

Los estudios más populares del mundo



```
[ ]:
```

```
[ ]:
```

```
[ ]:
```

```
[ ]:
```

```
[ ]:
```