

# MARRIAGES & DIVORCES IN SINGAPORE

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# MEDIAN AGE OF BRIDES AND GROOMS BY MARRIAGE ORDER

Link: [https://data.gov.sg/dataset/median-age-of-grooms-and-brides-by-marriage-order-annual?view\\_id=fb571ca9-c1f5-4c8f-8dbe-bbcbedfcbee&resource\\_id=f0cf2243-390d-4225-812a-262befc71293](https://data.gov.sg/dataset/median-age-of-grooms-and-brides-by-marriage-order-annual?view_id=fb571ca9-c1f5-4c8f-8dbe-bbcbedfcbee&resource_id=f0cf2243-390d-4225-812a-262befc71293)

A	B	C
year	level_1	value
1961	Grooms - Total Marriages	27.3
1961	Grooms - First Marriages	26.9
1961	Grooms - Remarriages	36.8
1961	Brides - Total Marriages	22.8
1961	Brides - First Marriages	22.5
1961	Brides - Remarriages	28
1962	Grooms - Total Marriages	27.4
1962	Grooms - First Marriages	27.1
1962	Grooms - Remarriages	36.2
1962	Brides - Total Marriages	23
1962	Brides - First Marriages	22.8
1962	Brides - Remarriages	29
1963	Grooms - Total Marriages	27.4
1963	Grooms - First Marriages	27.2
1963	Grooms - Remarriages	38.9
1963	Brides - Total Marriages	23.1
1963	Brides - First Marriages	22.9
1963	Brides - Remarriages	30
1964	Grooms - Total Marriages	27.5
1964	Grooms - First Marriages	27.3
1964	Grooms - Remarriages	38.6
1964	Brides - Total Marriages	23.2

# MEDIAN AGE OF BRIDES AND GROOMS BY MARRIAGE ORDER

- **Step 1:**

Installing MongoDB through terminal on Mac

Once MongoDB has been installed successfully, this message appears

**Step 1**

```
((base) Yimins-MacBook-Air:~ Yimin$ /bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"  
  
(base) Yimins-MacBook-Air:~ Yimin$ xcode-select --install  
xcode-select: error: command line tools are already installed, use "Software Update" to install updates  
[base] Yimins-MacBook-Air:~ Yimin$ brew tap mongodb/brew  
[base] Yimins-MacBook-Air:~ Yimin$ brew install mongodb-community  
  
==> mongodb-community  
To start mongodb/brew/mongodb-community now and restart at login:  
  brew services start mongodb/brew/mongodb-community  
Or, if you don't want/need a background service you can just run:  
  mongod --config /usr/local/etc/mongod.conf
```

- **Step 2:**

Installing mongo on Anaconda

**Step 2**

```
((base) Yimins-MacBook-Air:~ Yimin$ conda install pymongo  
Collecting package metadata (current_repodata.json): done  
Solving environment: done
```

- **Step 3:**

Installing Pygal and Bokeh packages on Anaconda using Mac's terminal

**Step 3**

```
((base) Yimins-MacBook-Air:~ Yimin$ pip install pygal  
((base) Yimins-MacBook-Air:~ Yimin$ pip install Bokeh
```

# MEDIAN AGE OF BRIDES AND GROOMS BY MARRIAGE ORDER

- **Step 4:**

Importing dataset (in csv) into MongoDB terminal, by first launching the MongoDB terminal and create a database in the MongoDB terminal

```
(base) Yimins-MacBook-Air:~ Yimin$ mongo
MongoDB shell version v5.0.5
connecting to: mongodb://127.0.0.1:27017/?compressors=disabled&gssapiServiceName=mongodb
Implicit session: session { "id" : UUID("4e424329-09ac-4650-9879-9254dc7e19ea") }
MongoDB server version: 5.0.5
-----
```

```
[> use ca2_python
switched to db ca2_python
[> db.ca2_python
ca2_python.ca2_python
[> show dbs
Testtest      0.000GB
admin         0.000GB
ca2-python    0.000GB
config        0.000GB
it8701_database 0.000GB
local         0.000GB
users         0.000GB
[> db.ca2_python
ca2_python.ca2_python
[> db.ca2_python.insertOne({x:1})
{
    "acknowledged" : true,
    "insertedId" : ObjectId("61f6658ed5c1ce2f821f1993")
}
[> show dbs
Testtest      0.000GB
admin         0.000GB
ca2-python    0.000GB
ca2_python    0.000GB
```

**Step 4**

- *Before creating database*

```
config        0.000GB
it8701_database 0.000GB
local         0.000GB
users         0.000GB
[> use ca2_python
switched to db ca2_python
[> show collections
ca2_python
medianage
```

- *After creating database*

# MEDIAN AGE OF BRIDES AND GROOMS BY MARRIAGE ORDER

- **Step 5:**

Import the file on the terminal, by specifying the fields – DB, Collection, Type, Headerline, Filepath

```
(base) Yimins-MacBook-Air:~ Yimin$ mongoimport --db=ca2_python --collection=median_age --type=csv --headerline --file=/Users/Yimin/Desktop/median-age-of-grooms-and-brides-by-marriage-order.csv
2022-01-30T18:24:48.997+0800    connected to: mongodb://localhost/
2022-01-30T18:24:49.101+0800    348 document(s) imported successfully. 0 document(s) failed to import.
```

**Step 5**

- **Step 6:**

In the MongoDB terminal, populate the dataset by keying in the command on the right

```
> use ca2_python
switched to db ca2_python
> show collections
ca2_python
medianage
medianages
> db.medianages.find()
{
  "_id": ObjectId("61f66745592ce3e0f709b092"),
  "year": 1961,
  "level_1": "Grooms - Total Marriages",
  "value": 27.3
}
{
  "_id": ObjectId("61f66745592ce3e0f709b093"),
  "year": 1961,
  "level_1": "Grooms - First Marriages",
  "value": 26.9
}
{
  "_id": ObjectId("61f66745592ce3e0f709b094"),
  "year": 1961,
  "level_1": "Brides - First Marriages",
  "value": 22.5
}
{
  "_id": ObjectId("61f66745592ce3e0f709b095"),
  "year": 1961,
  "level_1": "Brides - Remarriages",
  "value": 28
}
{
  "_id": ObjectId("61f66745592ce3e0f709b096"),
  "year": 1962,
  "level_1": "Grooms - Total Marriages",
  "value": 27.4
}
{
  "_id": ObjectId("61f66745592ce3e0f709b097"),
  "year": 1962,
  "level_1": "Grooms - First Marriages",
  "value": 27.1
}
{
  "_id": ObjectId("61f66745592ce3e0f709b098"),
  "year": 1962,
  "level_1": "Grooms - Remarriages",
  "value": 36.2
}
{
  "_id": ObjectId("61f66745592ce3e0f709b099"),
  "year": 1962,
  "level_1": "Brides - First Marriages",
  "value": 22.8
}
{
  "_id": ObjectId("61f66745592ce3e0f709b09a"),
  "year": 1962,
  "level_1": "Brides - Remarriages",
  "value": 29
}
{
  "_id": ObjectId("61f66745592ce3e0f709b09b"),
  "year": 1963,
  "level_1": "Grooms - Total Marriages",
  "value": 27.4
}
{
  "_id": ObjectId("61f66745592ce3e0f709b09c"),
  "year": 1963,
  "level_1": "Grooms - First Marriages",
  "value": 27.2
}
{
  "_id": ObjectId("61f66745592ce3e0f709b09d"),
  "year": 1963,
  "level_1": "Grooms - Remarriages",
  "value": 38.9
}
{
  "_id": ObjectId("61f66745592ce3e0f709b09e"),
  "year": 1963,
  "level_1": "Brides - Total Marriages",
  "value": 23.1
}
{
  "_id": ObjectId("61f66745592ce3e0f709b09f"),
  "year": 1963,
  "level_1": "Brides - First Marriages",
  "value": 22.9
}
{
  "_id": ObjectId("61f66745592ce3e0f709b0a0"),
  "year": 1963,
  "level_1": "Brides - Remarriages",
  "value": 30
}
{
  "_id": ObjectId("61f66745592ce3e0f709b0a1"),
  "year": 1964,
  "level_1": "Grooms - Total Marriages",
  "value": 27.5
}
{
  "_id": ObjectId("61f66745592ce3e0f709b0a2"),
  "year": 1964,
  "level_1": "Grooms - First Marriages",
  "value": 27.3
}
{
  "_id": ObjectId("61f66745592ce3e0f709b0a3"),
  "year": 1964,
  "level_1": "Grooms - Remarriages",
  "value": 38.6
}
{
  "_id": ObjectId("61f66745592ce3e0f709b0a4"),
  "year": 1962,
  "level_1": "Brides - Total Marriages",
  "value": 23
}
{
  "_id": ObjectId("61f66745592ce3e0f709b0a5"),
  "year": 1961,
  "level_1": "Grooms - Remarriages",
  "value": 36.8
}
```

**Step 6**

# MEDIAN AGE OF BRIDES AND GROOMS BY MARRIAGE ORDER

- **Step 1:**

In the anaconda jupyter notebook window, import the relevant libraries – pymongo, pygal, pandas

**Step 1**

- **Step 2:**

Filter the irrelevant fields, leaving only the required fields for analysis – Brides & Grooms (first marriages)

**Step 2**

- **Step 3:**

Populate the values as a list in python

**Step 3**

- **Step 4:**

Generating the pygal chart and exporting the output

**Step 4**

```
#import all relevant libraries - mongo, pygal and pandas
import pymongo
from pymongo import MongoClient
import pygal
import pandas as pd
client = MongoClient()
db = client.ca2_python
collection = db.median_age

#median-age-of-grooms-and-brides-by-marriage-order in DESKTOP

#filter data to show only first marriages values
collection.delete_many({"level_1": "Grooms - Total Marriages"})
collection.delete_many({"level_1": "Grooms - Remarriages"})
collection.delete_many({"level_1": "Brides - Remarriages"})
collection.delete_many({"level_1": "Brides - Total Marriages"})

list = []
for item in collection.find():
    list.append(item) #to show SQL output as a list

#converting list to pandas Dataframe
medage = pd.DataFrame(list)
med_age = medage.set_index('year')

#extracting brides - first marriages value
ma_fem = med_age['level_1'] == 'Brides - First Marriages'
med_fem = med_age[ma_fem]

list_fem = []
for a in med_fem['value']:
    list_fem.append(a) #to print values without indexes

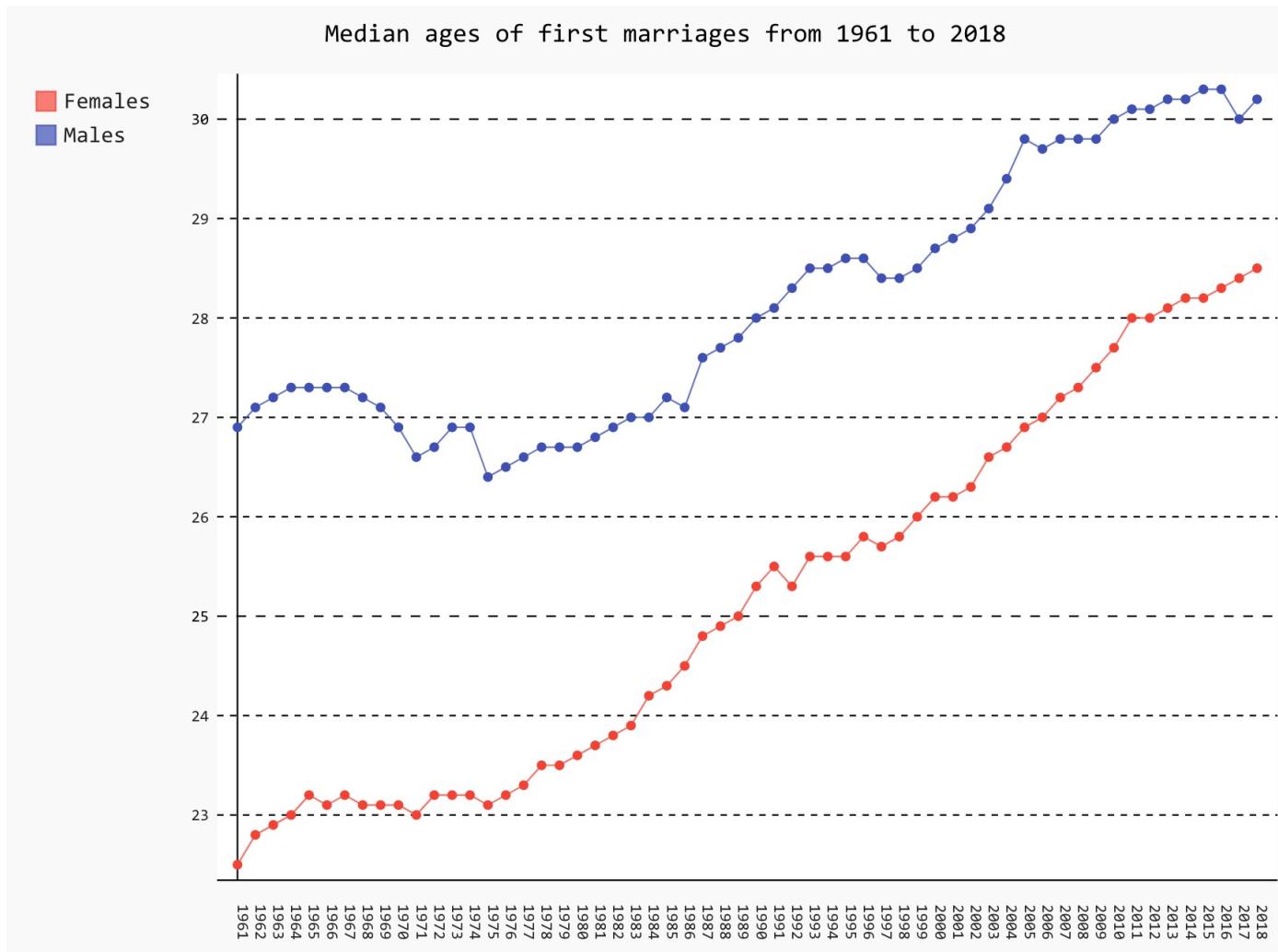
#extracting grooms - first marriages value
ma_mal = med_age['level_1'] == 'Grooms - First Marriages'
med_mal = med_age[ma_mal]

list_mal = []
for b in med_mal['value']:
    list_mal.append(b) #to print values without indexes

line_chart = pygal.Line(x_label_rotation=90)
line_chart.title = 'Median ages of first marriages from 1961 to 2018'
line_chart.x_labels = map(str, range(1961, 2019))
line_chart.add('Females', list_fem)
line_chart.add('Males', list_mal)

line_chart.render_to_file('median_age_line_chart.svg') #generate chart output as a file
```

# MEDIAN AGE OF BRIDES AND GROOMS BY MARRIAGE ORDER – PYGAL CHART



- An obvious upward increase trend in median ages of first marriages for both males and females from 1961 to 2018
- In **1961**, median ages of first marriages were as below:
  - Woman: 22.5
  - Man: 26.9
- In **2018**, median ages of first marriages were as below:
  - Woman: 28.5
  - Man: 30.5

# WHY ARE SINGAPOREANS CHOOSING TO MARRY LATER OVER THE YEARS?

## WHAT SOCIOLOGISTS SAY...

About late marriages:

The trend of late marriages was not surprising, sociologists said.

Associate Professor Tan Ern Ser from the National University of Singapore said that a possible reason could be because “people spend (a) longer time in the education system and when they graduate, they are likely to prioritise career over marriage”.

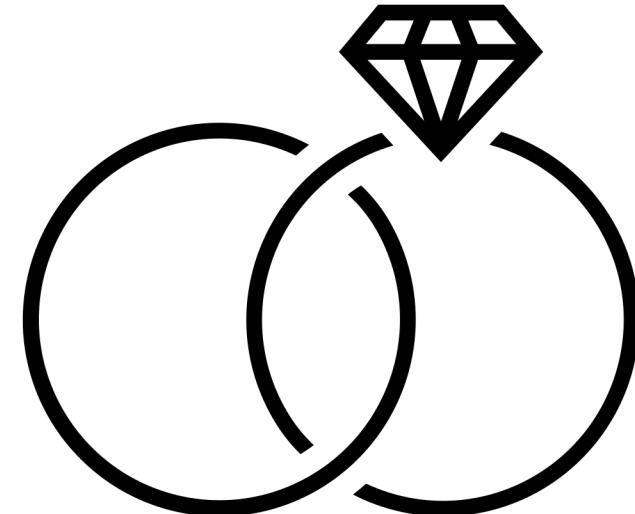
He added: “The less than favourable economic climate could also impact people’s sense of security, and they probably believe that marriage should be built on a more secure economic foundation.”

Professor Paulin Tay Straughan, dean of students at the Singapore Management University, said that the trend of delayed marriages and parenthood has been a longstanding one.

Young Singaporeans have set high standards for marriage, she reasoned, and marriage is now seen as a commitment and “not just a rite of passage”.

Secondly, the “pressure” that the younger generation feel to excel in school and the workplace reduces time to meet potential life partners.

She added that in Singapore, singlehood is a norm for those under 30.



Source: <https://www.todayonline.com/singapore/couples-singapore-getting-married-later-fewer-getting-divorced#:~:text=The%20trend%20of%20late%20marriages,to%20prioritise%20career%20over%20marriage%E2%80%9D>.

# MEDIAN AGE AT FIRST MARRIAGE OF GROOMS AND BRIDES BY EDUCATIONAL QUALIFICATION, ANNUAL

Link: [https://data.gov.sg/dataset/median-age-at-first-marriage-of-grooms-and-brides-by-educational-qualification-annual?resource\\_id=e25a47ed-a41f-410e-b947-a4e30c1b308e](https://data.gov.sg/dataset/median-age-at-first-marriage-of-grooms-and-brides-by-educational-qualification-annual?resource_id=e25a47ed-a41f-410e-b947-a4e30c1b308e)

A	B	C	D
year	level_1	level_2	value
1984	First Marriages For Grooms	Secondary & Below	26.6
1984	First Marriages For Grooms	Post-secondary	27.7
1984	First Marriages For Grooms	University	28.9
1984	First Marriages For Brides	Secondary & Below	23.9
1984	First Marriages For Brides	Post-secondary	25.3
1984	First Marriages For Brides	University	26.5
1985	First Marriages For Grooms	Secondary & Below	26.7
1985	First Marriages For Grooms	Post-secondary	27.7
1985	First Marriages For Grooms	University	28.8
1985	First Marriages For Brides	Secondary & Below	23.9
1985	First Marriages For Brides	Post-secondary	25.5
1985	First Marriages For Brides	University	26.5
1986	First Marriages For Grooms	Secondary & Below	26.8
1986	First Marriages For Grooms	Post-secondary	28.1
1986	First Marriages For Grooms	University	29.1
1986	First Marriages For Brides	Secondary & Below	24
1986	First Marriages For Brides	Post-secondary	25.8
1986	First Marriages For Brides	University	26.8
1987	First Marriages For Grooms	Secondary & Below	27.1
1987	First Marriages For Grooms	Post-secondary	28.2
1987	First Marriages For Grooms	University	29.3
1987	First Marriages For Brides	Secondary & Below	24.4
1987	First Marriages For Brides	Post-secondary	26
1987	First Marriages For Brides	University	26.7
1988	First Marriages For Grooms	Secondary & Below	27.3

# MEDIAN AGE AT FIRST MARRIAGE OF GROOMS AND BRIDES BY EDUCATIONAL QUALIFICATION, ANNUAL

- Step 1:

Import the relevant libraries – Pandas, matplotlib & seaborn, and import the data using pandas

Step 1

```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

#median-age-at-first-marriage-of-grooms-and-brides-by-educational-qualification

data_edu = pd.read_csv('/Users/Yimin/Documents/SP/Introduction to Programming for Data Science/CA2/DATA.csv',
                      index_col = 'year')
```

- Step 2:

Plotting the scatterplot for all the values given in the data, from year 1984 till 2018

Step 2

```
ax = sns.scatterplot(x=data_edu.index, y=data_edu['value'], hue = data_edu['level_2'],
                      palette = 'viridis')

#separating the data to different groups
sec = data_edu['level_2'] == 'Secondary & Below'
postsec = data_edu['level_2'] == 'Post-secondary'
uni = data_edu['level_2'] == 'University'

data_sec = data_edu[sec]
data_postsec = data_edu[postsec]
data_uni = data_edu[uni]

sns.regplot(data=data_sec, x=data_sec.index, y=data_sec['value'], scatter=False, ax=ax)
sns.regplot(data=data_postsec, x=data_postsec.index, y=data_postsec['value'], scatter=False, ax=ax)
sns.regplot(data=data_uni, x=data_uni.index, y=data_uni['value'], scatter=False, ax=ax)
plt.title('Median age of first marriages based on educational qualification over the years')
plt.xticks(rotation=90)

plt.show()
```

- Step 3:

Reorganizing the data and sub-grouping them based on their educational qualification – 1) Secondary & below, 2) Post-secondary and 3) University

Step 3

- Step 4:

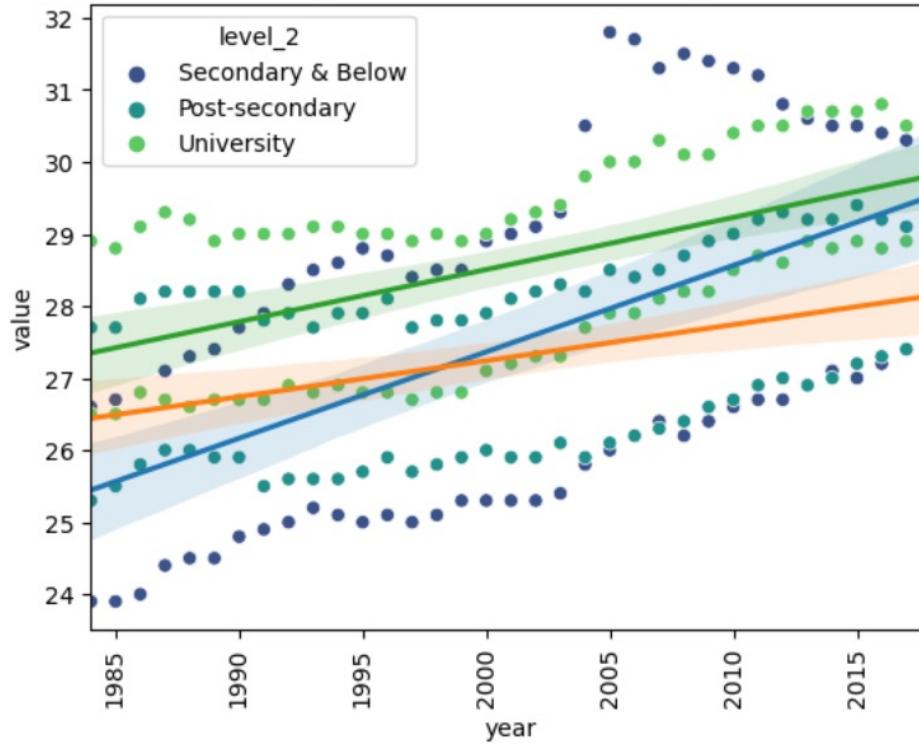
Plotting the best fit line for the scatterplot points using regplot

Step 4

# MEDIAN AGE AT FIRST MARRIAGE OF GROOMS AND BRIDES BY EDUCATIONAL QUALIFICATION, ANNUAL

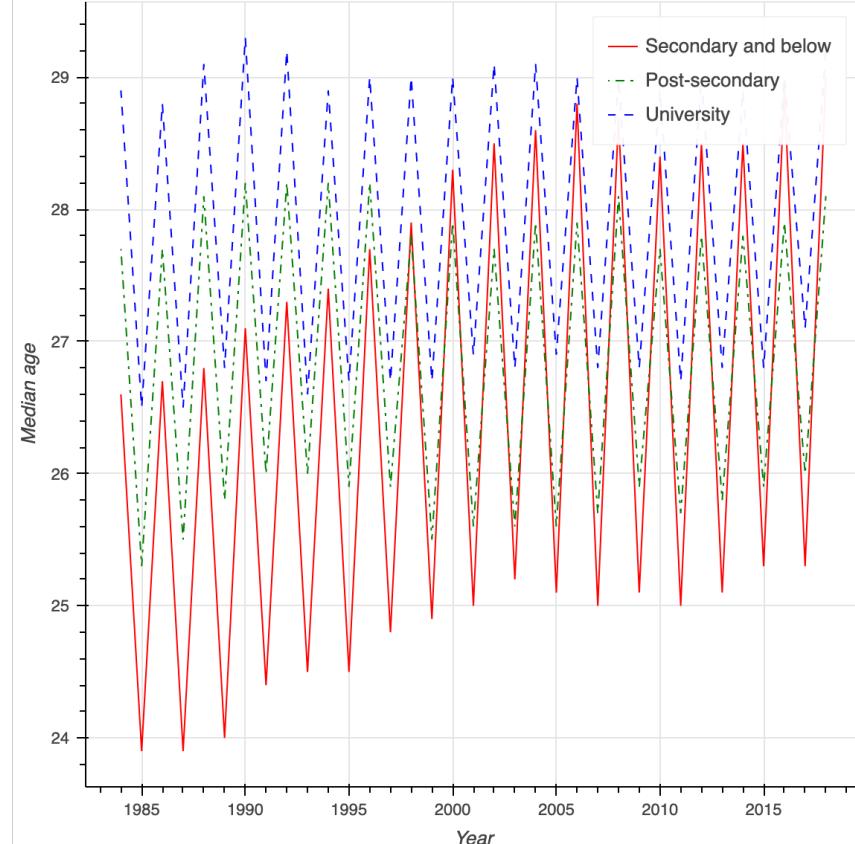
Seaborn

Median age of first marriages based on educational qualification over the years



Bokeh

Median age of first marriages based on educational qualification over the years



An obvious upward in trend, regardless of their educational qualification levels, as proven by their best-fit lines

# TOTAL NUMBER OF MARRIAGES BY EDUCATIONAL QUALIFICATIONS - GROOMS

Link: [https://data.gov.sg/dataset/first-marriages-couples-under-women-s-charter-educational-qualification-brides-grooms-annual?resource\\_id=7331cfb7-051f-4e25-937a-46d47f5ecf7e](https://data.gov.sg/dataset/first-marriages-couples-under-women-s-charter-educational-qualification-brides-grooms-annual?resource_id=7331cfb7-051f-4e25-937a-46d47f5ecf7e) (Grooms)

<https://data.gov.sg/dataset/first-marriages-couples-under-women-s-charter-educational-qualification-brides-grooms-annual> (Brides)

year	level_1	level_2	value
1984	Total	Grooms - Secondary & Below	14125
1984	Total	Grooms - Post-secondary	2944
1984	Total	Grooms - University	1633
1984	Brides - Secondary & Below	Grooms - Secondary & Below	13238
1984	Brides - Secondary & Below	Grooms - Post-secondary	1856
1984	Brides - Secondary & Below	Grooms - University	490
1984	Brides - Post-secondary	Grooms - Secondary & Below	825
1984	Brides - Post-secondary	Grooms - Post-secondary	961
1984	Brides - Post-secondary	Grooms - University	434
1984	Brides - University	Grooms - Secondary & Below	62
1984	Brides - University	Grooms - Post-secondary	127
1984	Brides - University	Grooms - University	709
1985	Total	Grooms - Secondary & Below	12912
1985	Total	Grooms - Post-secondary	2745
1985	Total	Grooms - University	1651
1985	Brides - Secondary & Below	Grooms - Secondary & Below	12052
1985	Brides - Secondary & Below	Grooms - Post-secondary	1705
1985	Brides - Secondary & Below	Grooms - University	469
1985	Brides - Post-secondary	Grooms - Secondary & Below	788
1985	Brides - Post-secondary	Grooms - Post-secondary	896
1985	Brides - Post-secondary	Grooms - University	404
1985	Brides - University	Grooms - Secondary & Below	72
1985	Brides - University	Grooms - Post-secondary	144
1985	Brides - University	Grooms - University	778
1986	Total	Grooms - Secondary & Below	10378
1986	Total	Grooms - Post-secondary	2249

# TOTAL NUMBER OF MARRIAGES BY EDUCATIONAL QUALIFICATIONS - GROOMS

- **Step 1:**

Import the relevant libraries – Pandas, matplotlib & seaborn, and import the data using pandas

```
import pandas as pd
import pygal

#total number of marriages by educational qualifications - grooms
#CHECK IF NULL VALUES PRESENT

#import data & indexing year column
data = pd.read_csv('/Users/Yimin/Documents/SP/Introduction to Programming for Data Science/CA2/Datasets/first-marriages.csv')

#create a boolean column for only total values
total = data.loc[:, 'level_1'] == 'Total'

#filtering the data to show only total values
data_total = data[total]
```

**Step 1**

- **Step 2:**

Filter the total values to show only total values in the dataset

level_1	level_2	value
Total	Grooms - Secondary & Below	14125
Total	Grooms - Post-secondary	2944
Total	Grooms - University	1633

**Step 2**

# TOTAL NUMBER OF MARRIAGES BY EDUCATIONAL QUALIFICATIONS - GROOMS

- Step 3:

Reorganizing the data and sub-grouping them based on their educational qualification – 1) Secondary & below, 2) Post-secondary and 3) University

```
#filtering data to show grooms - secondary & below
sec = data_total.loc[:, 'level_2'] == 'Grooms - Secondary & Below'
data_sec = data_total[sec]
print('There are', data_sec.shape[0], 'rows and', data_sec.shape[1], 'columns of data categorised under "Grooms - Secondary & Below')
print(data_sec.describe())

list_sec = []
for a in data_sec['value']:
    list_sec.append(a)

#filtering data to show grooms - post-secondary
postsec = data_total.loc[:, 'level_2'] == 'Grooms - Post-secondary'
data_postsec = data_total[postsec]
print('There are', data_postsec.shape[0], 'rows and', data_postsec.shape[1], 'columns of data categorised under "Grooms - Post-secondary')
print(data_postsec.describe())

list_postsec = []
for b in data_postsec['value']:
    list_postsec.append(b)

#filtering data to show grooms - university
uni = data_total.loc[:, 'level_2'] == 'Grooms - University'
data_uni = data_total[uni]
print('There are', data_uni.shape[0], 'rows and', data_uni.shape[1], 'columns of data categorised under "Grooms - University')
print(data_uni.describe())

list_uni = []
for c in data_uni['value']:
    list_uni.append(c)
```

Step 3

# TOTAL NUMBER OF MARRIAGES BY EDUCATIONAL QUALIFICATIONS - GROOMS

- Step 4:

Using Pygal to generate the bar chart

```
bar_chart = pygal.Bar(x_label_rotation=90)
bar_chart.title = 'Number of First marriages for couples based on educational qualifications'
bar_chart.x_labels = map(str, range(1984, 2020))
bar_chart.add('Secondary and below', list_sec)
bar_chart.add('Post-Secondary', list_postsec)
bar_chart.add('University', list_uni)
bar_chart.render_to_file('first_marriages_bar_chart.svg') #generate chart output as a file
```

**Step 4**

# SUMMARY OF DATA & ITS STATISTICS

```
Successfully loaded dataset /Users/Yimin/Documents/SP/Introduction to Programming for Data Science/CA2/Datasets/first-marriages-for-couples-under-the-womens-charter-by-edu-qual-of-brides-grooms.csv
```

```
This is the shape of the dataset  
(432, 3)
```

```
This is the index of the dataset  
Int64Index([1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984,  
           ...  
           2019, 2019, 2019, 2019, 2019, 2019, 2019, 2019, 2019],  
           dtype='int64', name='year', length=432)
```

```
These are the columns in the dataset  
Index(['level_1', 'level_2', 'value'], dtype='object')
```

```
The total number of non-NA values in this dataset is:  
level_1    432  
level_2    432  
value      432  
dtype: int64
```

```
A summary of this dataset is shown below:  
<class 'pandas.core.frame.DataFrame'>  
Int64Index: 432 entries, 1984 to 2019  
Data columns (total 3 columns):  
 #   Column   Non-Null Count  Dtype    
 ---  --    
 0   level_1  432 non-null    object   
 1   level_2  432 non-null    object   
 2   value     432 non-null    int64    
dtypes: int64(1), object(2)  
memory usage: 13.5+ KB  
None
```

# SUMMARY OF DATA & ITS STATISTICS

```
There are 36 rows and 3 columns of data categorised under "Grooms - Secondary & Below"
```

```
      value
count    36.000000
mean   6490.194444
std    4132.890831
min    1203.000000
25%   2760.500000
50%   5703.000000
75%  10476.000000
max  14125.000000
```

```
There are 36 rows and 3 columns of data categorised under "Grooms - University"
```

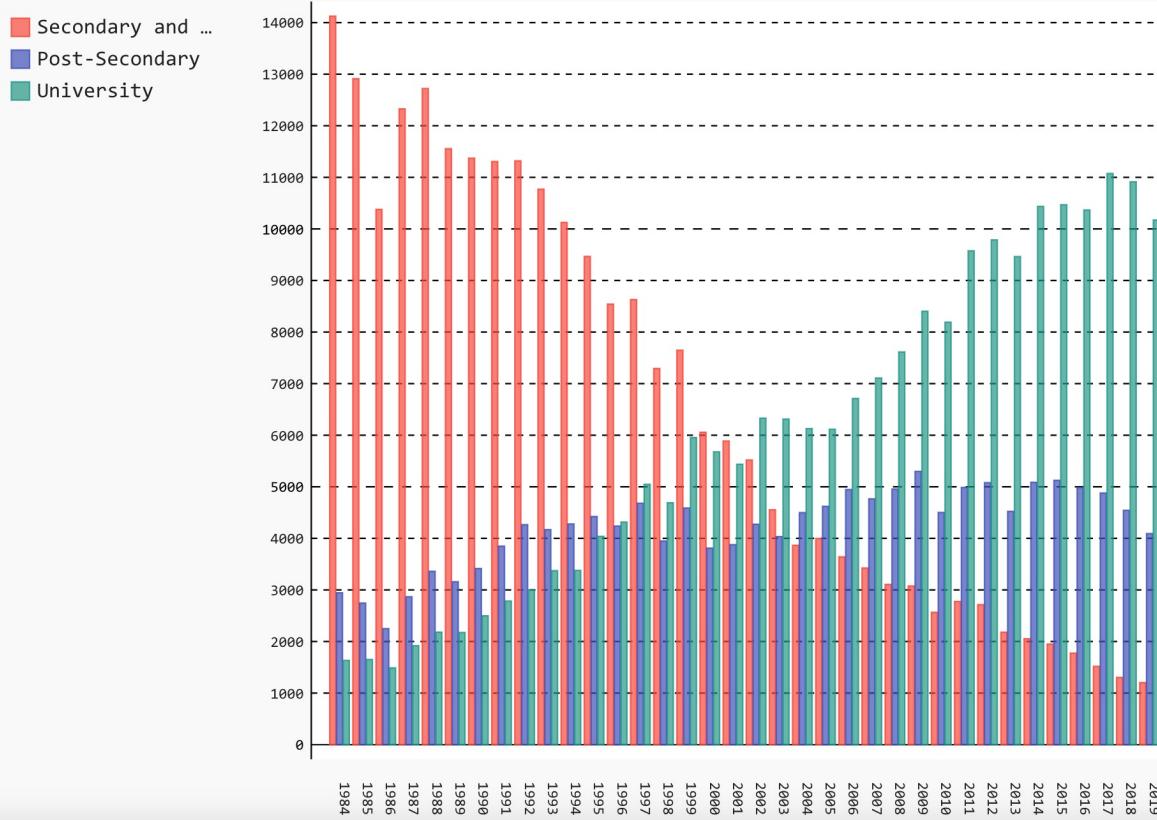
```
      value
count    36.000000
mean   6011.333333
std    3114.856915
min    1489.000000
25%   3280.000000
50%   6035.000000
75%  8668.000000
max  11074.000000
```

```
There are 36 rows and 3 columns of data categorised under "Grooms - Post-secondary"
```

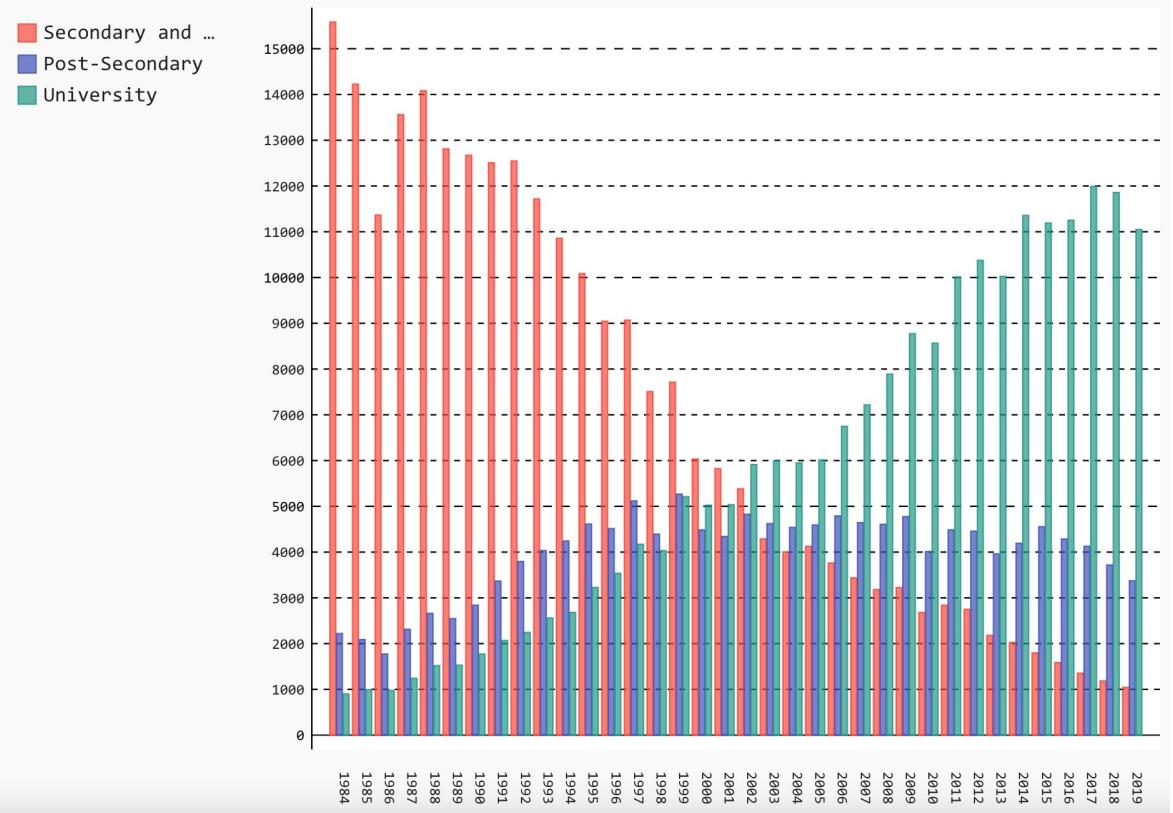
```
      value
count    36.000000
mean   4223.833333
std    754.728239
min    2249.000000
25%   3870.000000
50%   4350.500000
75%  4794.250000
max  5298.000000
```

# TOTAL NUMBER OF MARRIAGES BY EDUCATIONAL QUALIFICATIONS – GROOMS & BRIDES

First marriages for couples based on educational qualifications



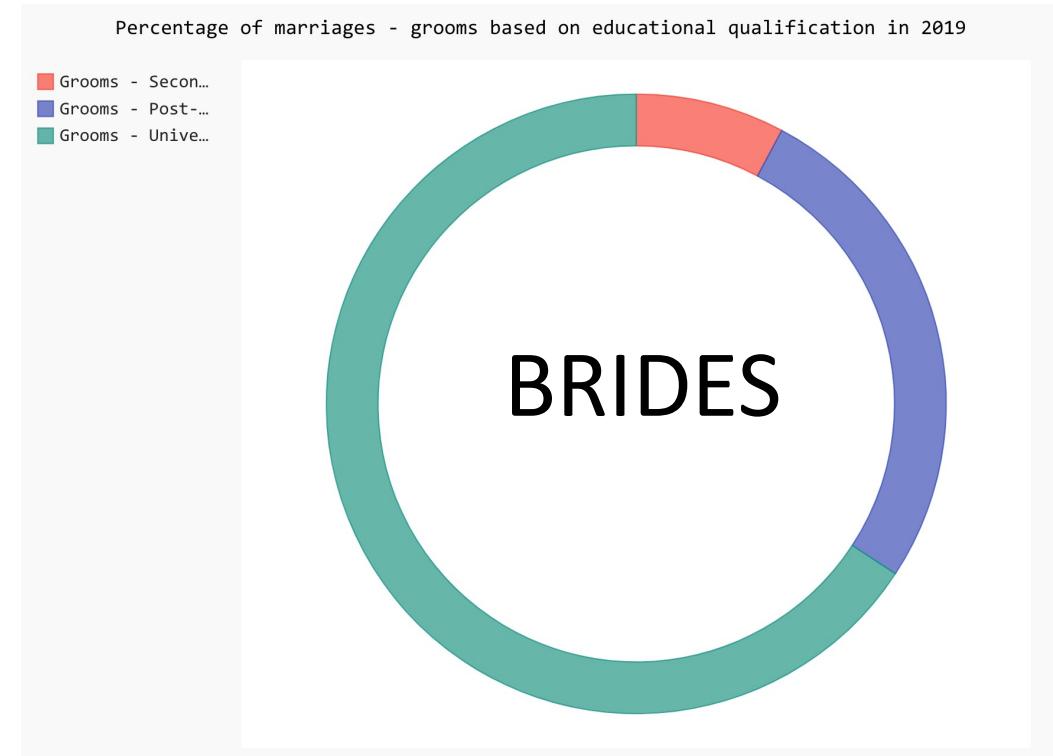
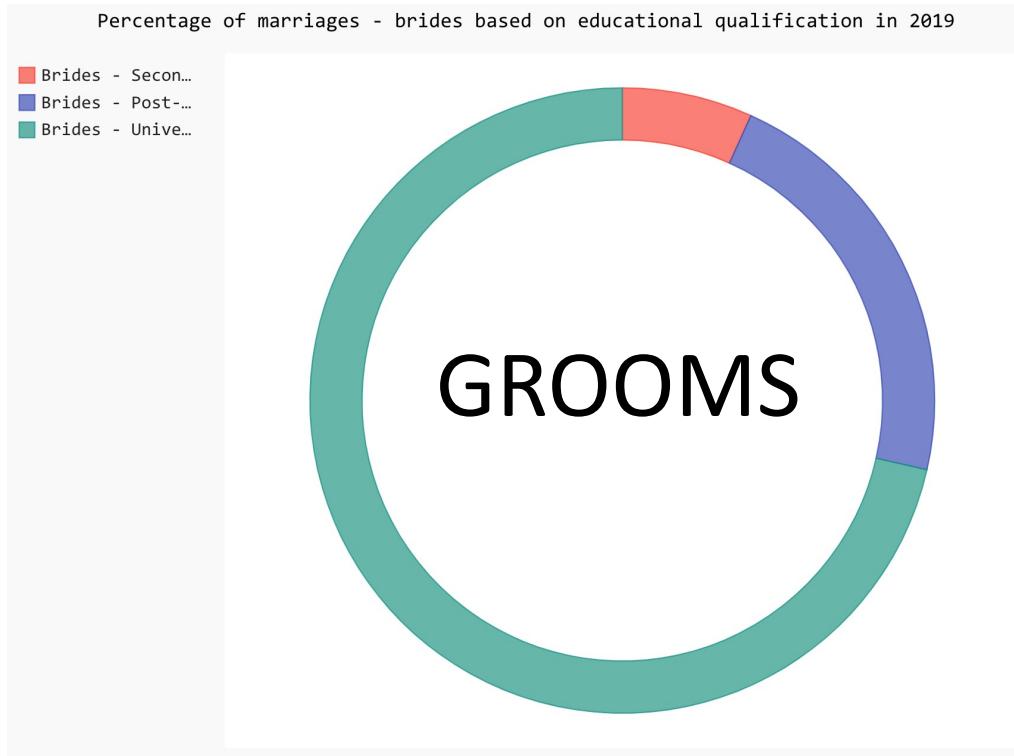
Number of First marriages for couples based on educational qualifications



Grooms

Brides

# TOTAL NUMBER OF MARRIAGES BY EDUCATIONAL QUALIFICATIONS – GROOMS & BRIDES IN 2019



# TOTAL NUMBER OF MARRIAGES BY EDUCATIONAL QUALIFICATIONS – GROOMS & BRIDES

The largest group of couples last year both had university qualifications, with 41.9 per cent of both bride and groom being university graduates, up from 31.3 per cent in 2010.

Meanwhile, the proportion of marriages involving a bride with higher educational qualifications than her husband increased from 17.2 per cent in 2010 to 18.6 per cent last year.

Source:

<https://www.straitstimes.com/singapore/community/traditional-norms-of-age-and-education-in-marriages-changing-with-time#:~:text=SINGAPORE%20%2D%20In%20marriage%2C%20the%20preference,17.9%20per%20cent%20last%20year>



# NUMBER OF DIVORCES FROM 1981 TO 2020

Link: [https://data.gov.sg/dataset/total-divorces-by-sex-and-age-group-of-divorcees-annual?resource\\_id=1d443653-df08-4e39-892b-fc198de883be](https://data.gov.sg/dataset/total-divorces-by-sex-and-age-group-of-divorcees-annual?resource_id=1d443653-df08-4e39-892b-fc198de883be)

year	level_1	value
1980	Total Male Divorcees	1551
1980	Total Female Divorcees	1551
1981	Total Male Divorcees	1842
1981	Total Female Divorcees	1842
1982	Total Male Divorcees	1842
1982	Total Female Divorcees	1842
1983	Total Male Divorcees	2069
1983	Total Female Divorcees	2069
1984	Total Male Divorcees	2028
1984	Total Female Divorcees	2028
1985	Total Male Divorcees	2048
1985	Total Female Divorcees	2048
1986	Total Male Divorcees	2271
1986	Total Female Divorcees	2271
1987	Total Male Divorcees	2339
1987	Total Female Divorcees	2339
1988	Total Male Divorcees	2536
1988	Total Female Divorcees	2536
1989	Total Male Divorcees	2541
1989	Total Female Divorcees	2541
1990	Total Male Divorcees	3150
1990	Total Female Divorcees	3150

# NUMBER OF DIVORCES FROM 1981 TO 2020

- **Step 1:**

Importing dataset (in csv) into MongoDB terminal, by first launching the [MongoDB terminal](#) and create a database in the [MongoDB terminal](#)

```
[(base) Yimins-MacBook-Air:~ Yimin$ mongoimport --db=ca2_python --collection=divorcerates --type=csv --headless  
rline --file=/Users/Yimin/Desktop/total-divorces-by-sex-of-divorcees-annual.csv  
2022-02-02T07:28:45.689+0800      connected to: mongodb://localhost/  
2022-02-02T07:28:45.945+0800      78 document(s) imported successfully. 0 document(s) failed to import.
```

**Step 1**

Update 2019 divorce rates using MongoDB

```
> db.divorcerates.find({"year" : 2019})  
{ "_id" : ObjectId("61f9c370d5c1ce2f821f1994"), "year" : 2019, "level_1" : "Total Male Divorcees", "value" : 7623 }
```

- **Step 2:**

Importing the relevant libraries – pandas, pygal, pymongo in Python, and its database.

```
#import all relevant libraries - mongo, pygal and pandas  
import pymongo  
from pymongo import MongoClient  
import pygal  
import pandas as pd  
  
#total-divorces-by-sex-of-divorcees-annual  
  
client = MongoClient()  
db = client.ca2_python  
  
collection = db.divorcerates
```

**Step 2**

# NUMBER OF DIVORCES FROM 1981 TO 2020

Delete duplicate values by deleting rows containing 'Total female divorcees', and updating 2020 divorce rates values

- **Step 3:**

Converting data given into pandas dataframe, and creating a list for all values for the data given

- **Step 4**

Generating all values into pygal line chart and saving output as svg file

```
#filter data to show only unique values
collection.delete_many({"level_1" : "Total Female Divorcees"})

#update 2020 values
collection.insert_one({"year": 2020, "level_1" : "Total Male Divorcees", "value" : 6959})

list_1 = []
for item in collection.find():
    list_1.append(item) #to show SQL output as a list
```

**Step 2**

```
#converting list to pandas Dataframe
divage = pd.DataFrame(list_1)
div_age = divage.set_index('year')

list_mal = []
for a in div_age['value']:
    list_mal.append(a) #to print values without indexes
```

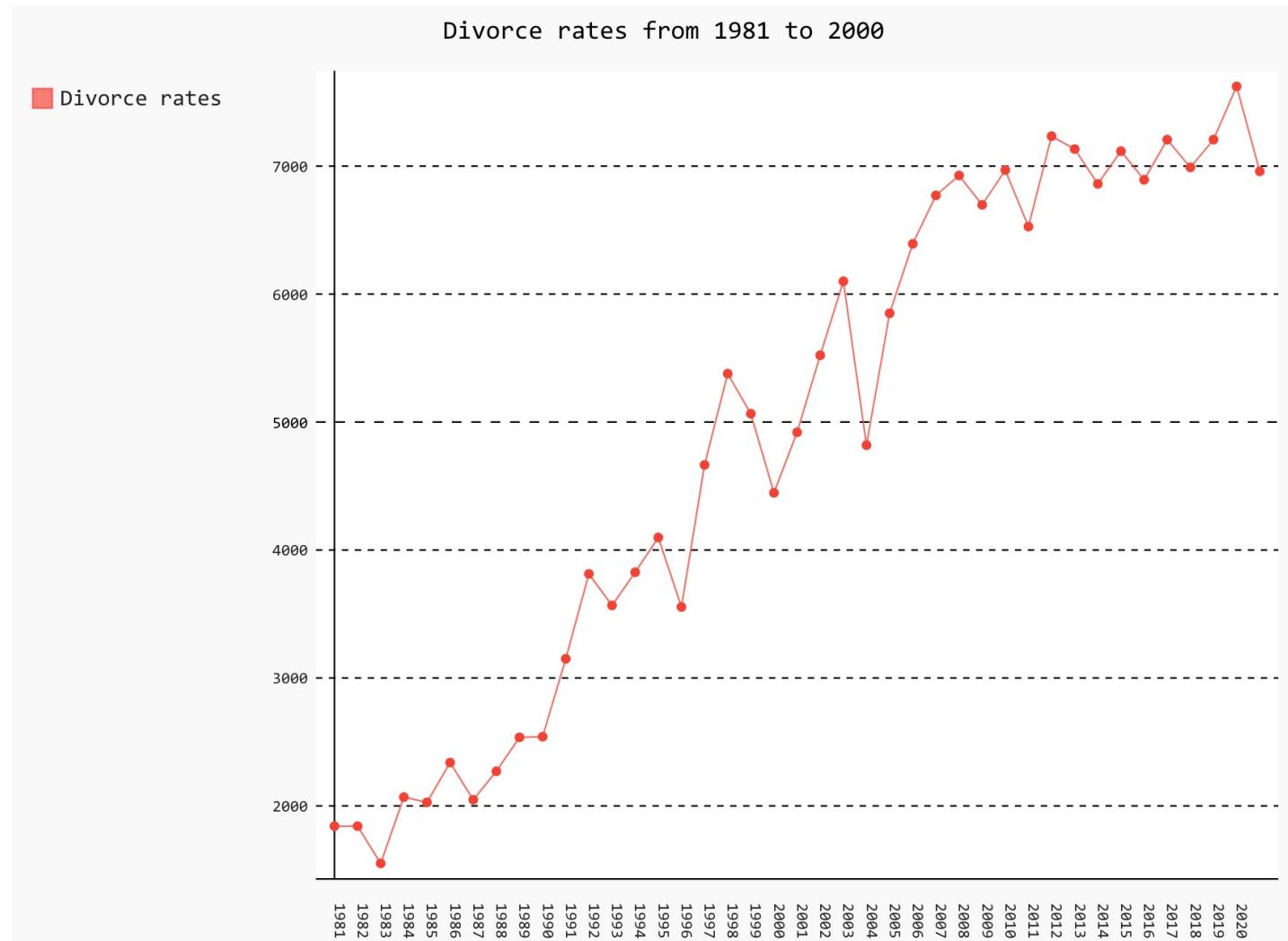
**Step 3**

```
line_chart = pygal.Line(x_label_rotation=90)
line_chart.title = 'Divorce rates from 1981 to 2000'
line_chart.x_labels = map(str, range(1981, 2021))
line_chart.add('Divorce rates', list_mal)

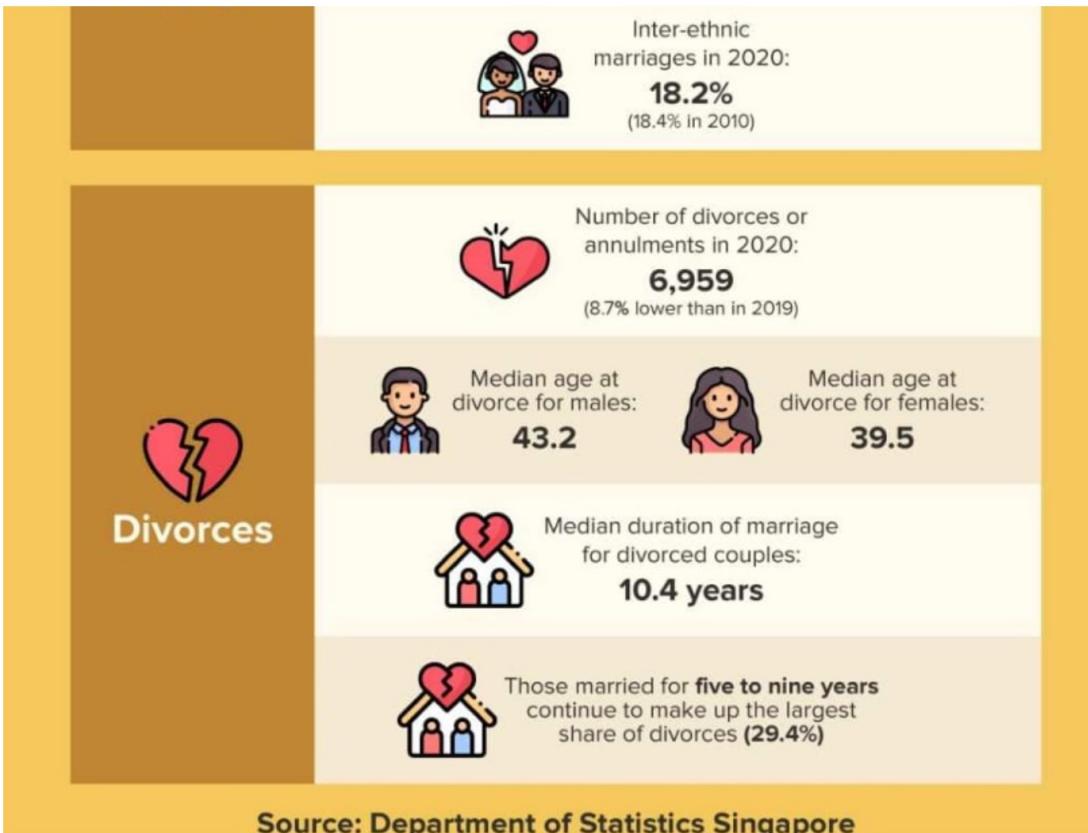
line_chart.render_to_file('divorce_rates_line_chart.svg') #generate chart output as a file
```

**Step 4**

# NUMBER OF DIVORCES FROM 1981 TO 2020



# ANALYSIS OF 2020'S DIVORCE RATES



today

Singapore

World

Minute

Big Read

Gen Y Speaks

Adulting 101

Commentary

Voice

SINGAPORE — The number of marriages and divorces in 2020 fell substantially from 2019, data from the Singapore Department of Statistics (SingStat) showed. Covid-19 disruptions caused the fall in nuptials and may have contributed to marriage dissolutions sliding to a 14-year low, it added.

Based on annual statistics released on Wednesday (July 7), the number of marriages registered in 2020 fell 10.9 per cent from a year earlier to 22,651. The number of marriages registered in 2019 was 25,434.

"This was due to the disruptions caused by the Covid-19 pandemic, including circuit breaker restrictions and safe management measures applied to wedding solemnisation and receptions from March 2020," the department said.

For the number of marriages that ended in a divorce or annulment in 2020, it fell 8.7 per cent — from 7,623 in the previous year to 6,959 last year.

**READ ALSO**  
5-person group size cap for dining in, maskless indoor sports activities from July 12; wedding receptions can resume

## NUMBER OF DIVORCES BY DURATION OF MARRIAGE

Link: [https://data.gov.sg/dataset/divorces-under-the-women-s-charter-by-duration-of-marriage-annual?resource\\_id=a02fa1ab-f3c0-4615-9a5a-1c975e4e6d98](https://data.gov.sg/dataset/divorces-under-the-women-s-charter-by-duration-of-marriage-annual?resource_id=a02fa1ab-f3c0-4615-9a5a-1c975e4e6d98)

year	level_1	level_2	value
1980	Total	Under 5 Years	87
1980	Total	5-9 Years	474
1980	Total	10-14 Years	226
1980	Total	15-19 Years	128
1980	Total	20-24 Years	74
1980	Total	25-29 Years	32
1980	Total	30 Years & Over	25
1981	Total	Under 5 Years	96
1981	Total	5-9 Years	544
1981	Total	10-14 Years	240
1981	Total	15-19 Years	157
1981	Total	20-24 Years	110
1981	Total	25-29 Years	47
1981	Total	30 Years & Over	34
1982	Total	Under 5 Years	132
1982	Total	5-9 Years	567
1982	Total	10-14 Years	282
1982	Total	15-19 Years	143
1982	Total	20-24 Years	87
1982	Total	25-29 Years	40
1982	Total	30 Years & Over	55
1983	Total	Under 5 Years	124
1983	Total	5-9 Years	648
1983	Total	10-14 Years	268
1983	Total	15-19 Years	145
1983	Total	20-24 Years	100
1983	Total	25-29 Years	37
1983	Total	30 Years & Over	36
1984	Total	Under 5 Years	131

# NUMBER OF DIVORCES BY DURATION OF MARRIAGE

- **Step 1:**

Importing the relevant libraries – pandas, pygal in Python, and its data using pandas.

```
import pandas as pd
import pygal

#divorces-under-the-womens-charter-by-duration-of-marriage

datadiv = pd.read_csv('/Users/Yimin/Documents/SP/Introduction to Programming for Data Science/CA2/Datasets/divorces-unc
                     index_col = 'year')
```

**Step 1**

# NUMBER OF DIVORCES BY DURATION OF MARRIAGE

- **Step 2:**

Subgroup all values of different durations of divorces into various lists

```
#5 and below years of marriage
cat1 = datadiv['level_2'] == 'Under 5 Years'
cat1data = datadiv[cat1]

list1 = []
for a in cat1data['value']:
    list1.append(a)

#5-9 Years
cat2 = datadiv['level_2'] == '5-9 Years'
cat2data = datadiv[cat2]

list2 = []
for b in cat2data['value']:
    list2.append(b)

#10-14 Years
cat3 = datadiv['level_2'] == '10-14 Years'
cat3data = datadiv[cat3]
```

**Step 2**

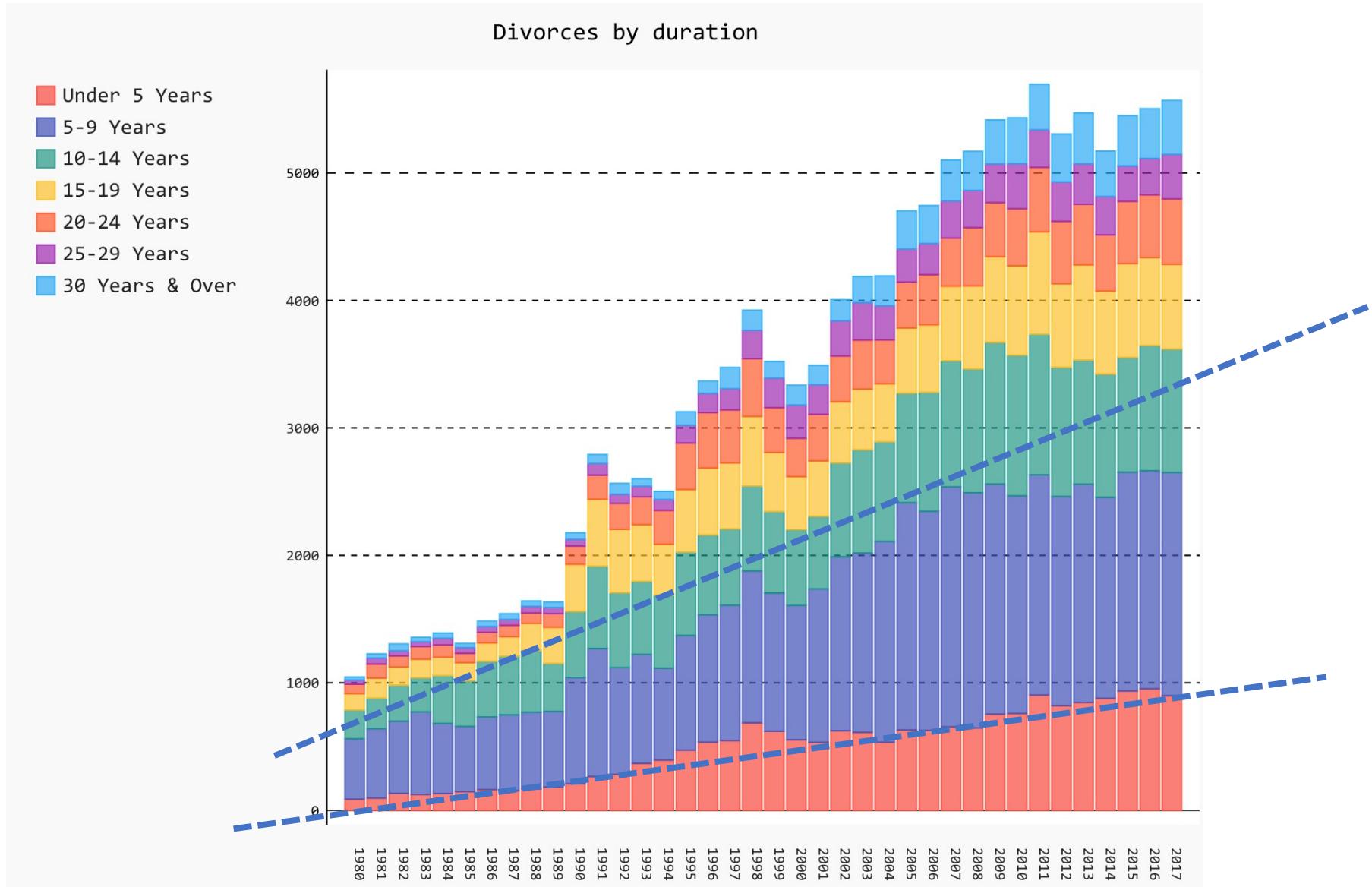
- **Step 3:**

Generating all values into pygal line chart and saving output as svg file

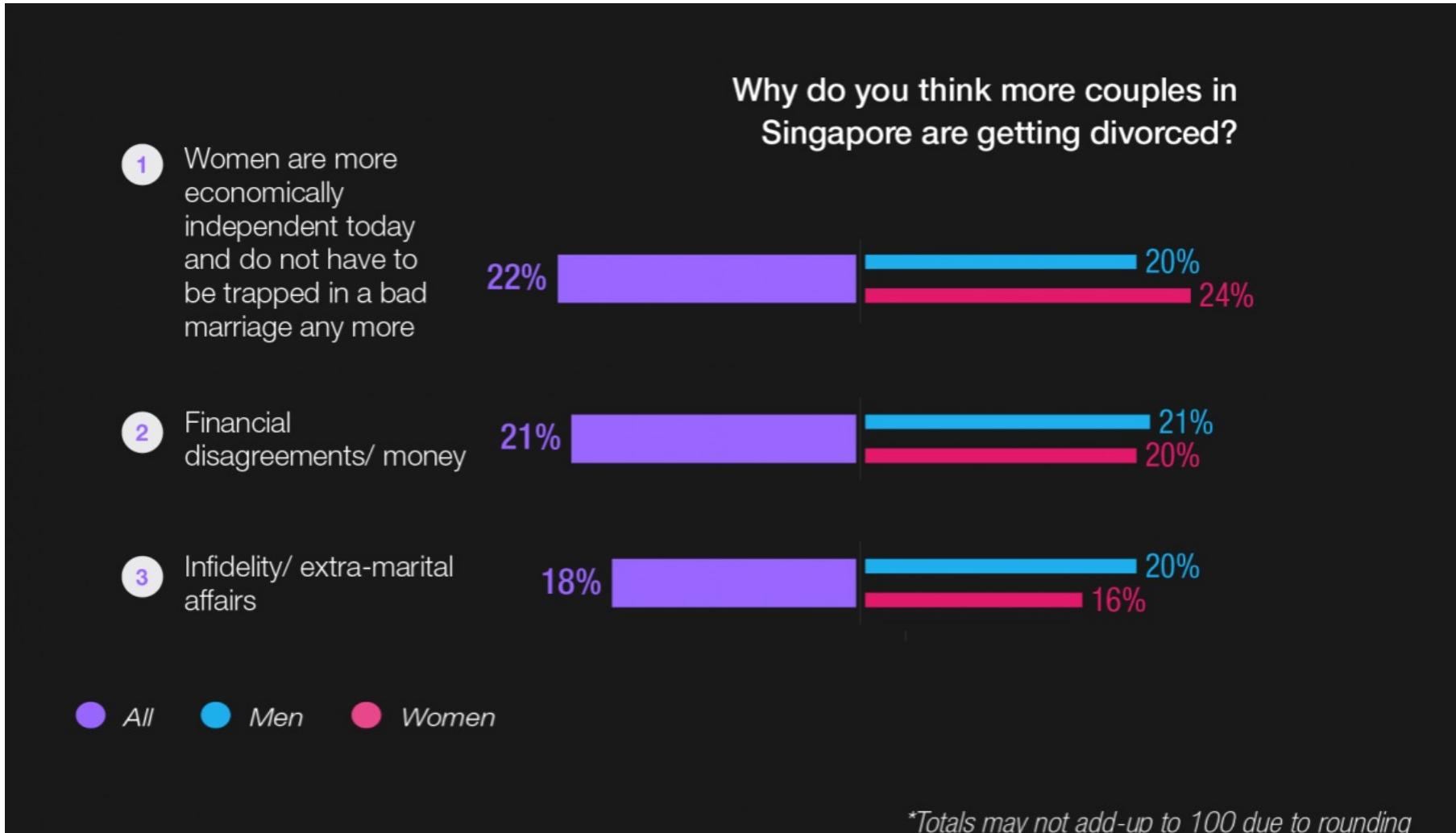
```
bar_chart = pygal.StackedBar(x_label_rotation=90)
bar_chart.title = 'Divorces by duration'
bar_chart.x_labels = map(str, range(1980, 2018))
bar_chart.add('Under 5 Years', list1)
bar_chart.add('5-9 Years', list2)
bar_chart.add('10-14 Years', list3)
bar_chart.add('15-19 Years', list4)
bar_chart.add('20-24 Years', list5)
bar_chart.add('25-29 Years', list6)
bar_chart.add('30 Years & Over', list7)
bar_chart.render_to_file('divorces_duration_stacked_bar.svg')
```

**Step 3**

# NUMBER OF DIVORCES BY DURATION OF MARRIAGE



# REASONS FOR RISING DIVORCE RATES (TOP 3)



Source: <https://blackbox.com.sg/everyone/honey-you-can-have-him-rising-divorce-in-singapore>

# REASONS FOR RISING DIVORCE RATES

Singaporean men are more prone to blame factors related to the sexual side of marriage – couples get tired of each other, infidelity,

a lack of intimacy, changes to physical appearance – while women are more likely to highlight communication issues, along with the greater opportunities that now allow them to exit a bad marriage.

These findings suggest that just as in other mature economies, divorce is set to keep rising in Singapore. Indeed, the root causes of strained marriages – financial woes, demanding jobs, busy schedules, family obligations, over-bearing in-laws – may have intensified during the pandemic-induced economic slowdown.

*Source: <https://blackbox.com.sg/everyone/honey-you-can-have-him-rising-divorce-in-singapore>*

**END**