swot

March 3, 2021

[120]:
```
print("  ")
print("20-2")
```

```
20-2
```

[121]:
```
from google.colab import auth
auth.authenticate_user()
!pip install --upgrade gspread
import gspread
from google.colab import drive
drive.mount('/content/drive')
import os
print(os.getcwd())
print(os.listdir('./'))
print(os.listdir('/content/drive'))
print(os.listdir('/content/drive/MyDrive/Colab Notebooks/swot'))
%ll -lF /content/drive/MyDrive/"Colab Notebooks"/swot
from oauth2client.client import GoogleCredentials
gs = gspread.authorize(GoogleCredentials.get_application_default())
!ln -fs /usr/share/zoneinfo/Europe/Moscow /etc/localtime
!date
```

```
Requirement already up-to-date: gspread in /usr/local/lib/python3.7/dist-
packages (3.7.0)
Requirement already satisfied, skipping upgrade: google-auth>=1.12.0 in
/usr/local/lib/python3.7/dist-packages (from gspread) (1.27.0)
Requirement already satisfied, skipping upgrade: google-auth-oauthlib>=0.4.1 in
/usr/local/lib/python3.7/dist-packages (from gspread) (0.4.2)
Requirement already satisfied, skipping upgrade: rsa<5,>=3.1.4; python_version
>= "3.6" in /usr/local/lib/python3.7/dist-packages (from google-
auth>=1.12.0->gspread) (4.7.2)
Requirement already satisfied, skipping upgrade: setuptools>=40.3.0 in
/usr/local/lib/python3.7/dist-packages (from google-auth>=1.12.0->gspread)
(54.0.0)
Requirement already satisfied, skipping upgrade: cachetools<5.0,>=2.0.0 in
/usr/local/lib/python3.7/dist-packages (from google-auth>=1.12.0->gspread)
```

```
(4.2.1)
Requirement already satisfied, skipping upgrade: six>=1.9.0 in
/usr/local/lib/python3.7/dist-packages (from google-auth>=1.12.0->gspread)
(1.15.0)
Requirement already satisfied, skipping upgrade: pyasn1-modules>=0.2.1 in
/usr/local/lib/python3.7/dist-packages (from google-auth>=1.12.0->gspread)
(0.2.8)
Requirement already satisfied, skipping upgrade: requests-oauthlib>=0.7.0 in
/usr/local/lib/python3.7/dist-packages (from google-auth-
oauthlib>=0.4.1->gspread) (1.3.0)
Requirement already satisfied, skipping upgrade: pyasn1>=0.1.3 in
/usr/local/lib/python3.7/dist-packages (from rsa<5,>=3.1.4; python_version >=
"3.6"->google-auth>=1.12.0->gspread) (0.4.8)
Requirement already satisfied, skipping upgrade: oauthlib>=3.0.0 in
/usr/local/lib/python3.7/dist-packages (from requests-oauthlib>=0.7.0->google-
auth-oauthlib>=0.4.1->gspread) (3.1.0)
Requirement already satisfied, skipping upgrade: requests>=2.0.0 in
/usr/local/lib/python3.7/dist-packages (from requests-oauthlib>=0.7.0->google-
auth-oauthlib>=0.4.1->gspread) (2.23.0)
Requirement already satisfied, skipping upgrade: certifi>=2017.4.17 in
/usr/local/lib/python3.7/dist-packages (from requests>=2.0.0->requests-
oauthlib>=0.7.0->google-auth-oauthlib>=0.4.1->gspread) (2020.12.5)
Requirement already satisfied, skipping upgrade: idna<3,>=2.5 in
/usr/local/lib/python3.7/dist-packages (from requests>=2.0.0->requests-
oauthlib>=0.7.0->google-auth-oauthlib>=0.4.1->gspread) (2.10)
Requirement already satisfied, skipping upgrade:
urllib3!=1.25.0,!=1.25.1,<1.26,>=1.21.1 in /usr/local/lib/python3.7/dist-
packages (from requests>=2.0.0->requests-oauthlib>=0.7.0->google-auth-
oauthlib>=0.4.1->gspread) (1.24.3)
Requirement already satisfied, skipping upgrade: chardet<4,>=3.0.2 in
/usr/local/lib/python3.7/dist-packages (from requests>=2.0.0->requests-
oauthlib>=0.7.0->google-auth-oauthlib>=0.4.1->gspread) (3.0.4)
Drive already mounted at /content/drive; to attempt to forcibly remount, call
drive.mount("/content/drive", force_remount=True).
/content
['.config', 'drive', 'adc.json', 'sample_data']
['.shortcut-targets-by-id', 'MyDrive', '.file-revisions-by-id', '.Trash']
['swot.gsheet', 'overall.png', 'threats.png', 'opportunities.png',
'strengths.png', 'weaknesses.png']
total 64
-rw------- 1 root 12193 Mar  3 22:06 opportunities.png
-rw------- 1 root 14115 Mar  3 21:41 overall.png
-rw------- 1 root 11880 Mar  3 22:09 strengths.png
-rw------- 1 root   151 Mar  3 22:55 swot.gsheet
-rw------- 1 root 12787 Mar  3 21:58 threats.png
-rw------- 1 root 12468 Mar  3 22:49 weaknesses.png
Wed Mar  3 22:58:51 MSK 2021
```

[122]:
```
import os
import time
print('\n  ')
%ll -lAF /content/drive/MyDrive/"Colab Notebooks"/swot
try:
  os.stat('/content/drive/MyDrive/Colab Notebooks/swot/swot.gsheet')
  table = gs.open_by_key('1eyKAnrIGESkF_5K7kDg2xMZEr2xf2EvIV-tFhBDMhGg')
except Exception as mistake:
  print('\n',mistake)
  print("  \n")
  %ll -lAF /content/drive/MyDrive/
  gs_01 = gs.create('table_01')
  time.sleep(30)
  %ll -lAF /content/drive/MyDrive/
  print(gs_01)
  print (gs_01.id)
  print(dir(gs_01))
  %ll -lAF /content/drive/MyDrive/"Colab Notebooks"/
  %mv /content/drive/MyDrive/table_01.gsheet /content/drive/MyDrive/"Colab␣
 ↪Notebooks"
  %ll -lAF /content/drive/MyDrive/"Colab Notebooks"
  print(dir(table))
```

```
total 64
-rw------- 1 root 12193 Mar  3 22:06 opportunities.png
-rw------- 1 root 14115 Mar  3 21:41 overall.png
-rw------- 1 root 11880 Mar  3 22:09 strengths.png
-rw------- 1 root   151 Mar  3 22:55 swot.gsheet
-rw------- 1 root 12787 Mar  3 21:58 threats.png
-rw------- 1 root 12468 Mar  3 22:49 weaknesses.png
```

[123]:
```
print("strengths")

worksheet = table.worksheet("strengths")
rows = worksheet.get_all_values()
sname = list()
importance  = list()
possibility = list()
spower = list()
i=0
for row in rows:
  if(i>0):
    print (i, row)
    sname.append(row[0])
    importance .append(int(row[1]))
```

```
    possibility.append(float(row[2]))
    spower.append(float(row[2])*int(row[1]))
  i+=1
for j in range(len(sname)):
  print(sname[j],"\n", "importance: ",importance[j], "possibility: ",␣
 ↪possibility[j], "power: ", spower[j])
strengths = sum(spower)
print("overall power: ", strengths)
worksheet = table.worksheet("summary")
worksheet.update("B1",opportunities)
```

```
strengths
1 ['  ', '10', '1', '10']
2 ['  ', '5', '0.2', '1']
3 ['  ', '10', '0.5', '5']
4 ['  ', '10', '0.9', '9']

 importance:  10 possibility:  1.0 power:  10.0

 importance:  5 possibility:  0.2 power:  1.0

 importance:  10 possibility:  0.5 power:  5.0

 importance:  10 possibility:  0.9 power:  9.0
overall power:  25.0
```

[123]:
```
{'spreadsheetId': '1eyKAnrIGESkF_5K7kDg2xMZEr2xf2EvIV-tFhBDMhGg',
 'updatedCells': 1,
 'updatedColumns': 1,
 'updatedRange': 'summary!B1',
 'updatedRows': 1}
```

[124]:
```
import matplotlib
matplotlib.use('Agg')
import matplotlib.pyplot as plt
import json

def matplot(element):
    import matplotlib.pyplot as plt
    x=list()
    x_float=list()
    title=list()
    y_float=list()

    print('\n<!!--matplot_data')
    print('\n<br>')
    title = list(range(1,len(sname)+1))
    x=title
```

```
    x_float = list(range(1,len(sname)+1))
    #title.append(data['name'])
    result = strengths
    y = spower
    y_float = spower
    print(x_float,title,y_float)
    x_pos=list()
    for i in range(x_float.__len__()):
        x_pos.append(i)
    print('<!--     \n', len( x_float), x_pos, y_float, ' -->\n')

    fig=plt.figure(figsize=(8,6), dpi=72)
    plt.bar(x_pos, y_float, width=0.75, align='edge', alpha=0.4)
    plt.xticks(x_pos,  x_float, fontsize=14)
    plt.xlabel('', fontsize=14)
    plt.ylabel(' ', fontsize=14)
    plt.title('strengths', fontsize=14)
    plt.grid(True, color='r', linestyle='-', linewidth=2)
    #plt.draw()
    plt.show()
    fig.savefig("/content/drive/MyDrive/Colab Notebooks/swot/strengths.png")
    print('<div class="d-flex flex-row ">')
    print('<div class="card m-1" style="width: 28rem;">',
          '<img  src="/content/drive/MyDrive/Colab Notebooks/swot/strengths.
 ↪png" class="card-img-top" alt="...">',
          '<div class="card-body">')

    for i in range(title.__len__()):
        print(i+1, " - ", title[i], "; ")
        i += 1
    print('</div>', '</div>')
    print('<div>')
    !date


def  to_browser():
    print("Content-type:text/html\r\n")
    print('\n',
    '\n<html>\n<head>\n<title>SWOT</title>\n<meta charset="UTF-8">',
    '\n<meta name="viewport" content="width=device-width, initial-scale=1.0">',
    '\n<meta http-equiv="X-UA-Compatible" content="ie=edge">',
    '\n<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.
 ↪0.0-beta/css/bootstrap.min.css" integrity="sha384-/Y6pD6FV/
 ↪Vv2HJnA6t+vslU6fwYXjCFtcEpHbNJ0lyAFsXTsjBbfaDjzALeQsN6M"␣
 ↪crossorigin="anonymous">',
    '\n</head>',
    '\n<body>',
```

```
    '\n<div class="container-md mx-3">'
    )

if __name__ == "__main__":
    #to_browser()
    element = 'swot_dictionary'
    matplot(element)
    #print("</div></body></html>",)
    !date
```

```
<!!--matplot_data

<br>
[1, 2, 3, 4] [1, 2, 3, 4] [10.0, 1.0, 5.0, 9.0]
<!--
 4 [0, 1, 2, 3] [10.0, 1.0, 5.0, 9.0]  -->

<div class="d-flex flex-row ">
<div class="card m-1" style="width: 28rem;"> <img
src="/content/drive/MyDrive/Colab Notebooks/swot/strengths.png" class="card-img-
top" alt="..."> <div class="card-body">
1  -  1 ;
2  -  2 ;
3  -  3 ;
4  -  4 ;
</div> </div>
<div>
Wed Mar  3 22:59:15 MSK 2021
Wed Mar  3 22:59:15 MSK 2021
```

[125]:
```
print("weaknesses")

worksheet = table.worksheet("weaknesses")
rows = worksheet.get_all_values()
wname = list()
importance  = list()
possibility = list()
wpower = list()
i=0
for row in rows:
  if(i>0):
    print (i, row)
    wname.append(row[0])
    importance .append(int(row[1]))
    possibility.append(float(row[2]))
    wpower.append(float(row[2])*int(row[1]))
```

```
  i+=1
for j in range(len(wname)):
  print(wname[j],"\n", "importance: ",importance[j], "possibility: ",␣
 ↪possibility[j], "power: ", wpower[j])
weaknesses = sum(wpower)
print("overall power: ", weaknesses)
worksheet = table.worksheet("summary")
worksheet.update("B2",opportunities)
```

```
weaknesses
1 ['     ', '9', '0.8', '7.2']
2 ['  ', '9', '0.8', '7.2']
3 ['  ', '8', '0.5', '4']
4 [' ', '6', '0.3', '1.8']

 importance:  9 possibility:  0.8 power:  7.2

 importance:  9 possibility:  0.8 power:  7.2

 importance:  8 possibility:  0.5 power:  4.0

 importance:  6 possibility:  0.3 power:  1.7999999999999998
overall power:  20.2
```

[125]:
```
{'spreadsheetId': '1eyKAnrIGESkF_5K7kDg2xMZEr2xf2EvIV-tFhBDMhGg',
 'updatedCells': 1,
 'updatedColumns': 1,
 'updatedRange': 'summary!B2',
 'updatedRows': 1}
```

[126]:
```
import matplotlib
matplotlib.use('Agg')
import matplotlib.pyplot as plt
import json

def matplot(element):
    import matplotlib.pyplot as plt
    x=list()
    x_float=list()
    title=list()
    y_float=list()

    print('\n<!!--matplot_data')
    print('\n<br>')
    title = list(range(1,len(wname)+1))
    x=title
    x_float = list(range(1,len(wname)+1))
    #title.append(data['name'])
```

```
    result = weaknesses
    y = wpower
    y_float =wpower
    print(x_float,title,y_float)
    x_pos=list()
    for i in range(x_float.__len__()):
        x_pos.append(i)
    print('<!--     \n', len( x_float), x_pos, y_float, ' -->\n')

    fig=plt.figure(figsize=(8,6), dpi=72)
    plt.bar(x_pos, y_float, width=0.75, align='edge', alpha=0.4)
    plt.xticks(x_pos,  x_float, fontsize=14)
    plt.xlabel('', fontsize=14)
    plt.ylabel(' ', fontsize=14)
    plt.title('weaknesses', fontsize=14)
    plt.grid(True, color='r', linestyle='-', linewidth=2)
    #plt.draw()
    plt.show()
    fig.savefig("/content/drive/MyDrive/Colab Notebooks/swot/weaknesses.png")
    print('<div class="d-flex flex-row ">')
    print('<div class="card m-1" style="width: 28rem;">',
          '<img  src="/content/drive/MyDrive/Colab Notebooks/swot/weaknesses.
 ↪png" class="card-img-top" alt="...">',
          '<div class="card-body">')

    for i in range(title.__len__()):
        print(i+1, " - ", title[i], "; ")
        i += 1
    print('</div>', '</div>')
    print('<div>')
    !date


def  to_browser():
    print("Content-type:text/html\r\n")
    print('\n',
    '\n<html>\n<head>\n<title>SWOT</title>\n<meta charset="UTF-8">',
    '\n<meta name="viewport" content="width=device-width, initial-scale=1.0">',
    '\n<meta http-equiv="X-UA-Compatible" content="ie=edge">',
    '\n<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.
 ↪0.0-beta/css/bootstrap.min.css" integrity="sha384-/Y6pD6FV/
 ↪Vv2HJnA6t+vslU6fwYXjCFtcEpHbNJ0lyAFsXTsjBbfaDjzALeQsN6M"␣
 ↪crossorigin="anonymous">',
    '\n</head>',
    '\n<body>',
    '\n<div class="container-md mx-3">'
    )
```

```
if __name__ == "__main__":
    #to_browser()
    element = 'swot_dictionary'
    matplot(element)
    #print("</div></body></html>",)
    !date
```

```
<!!--matplot_data

<br>
[1, 2, 3, 4] [1, 2, 3, 4] [7.2, 7.2, 4.0, 1.7999999999999998]
<!--
 4 [0, 1, 2, 3] [7.2, 7.2, 4.0, 1.7999999999999998]  -->

<div class="d-flex flex-row ">
<div class="card m-1" style="width: 28rem;"> <img
src="/content/drive/MyDrive/Colab Notebooks/swot/weaknesses.png" class="card-
img-top" alt="..."> <div class="card-body">
1  -  1 ;
2  -  2 ;
3  -  3 ;
4  -  4 ;
</div> </div>
<div>
Wed Mar  3 22:59:29 MSK 2021
Wed Mar  3 22:59:29 MSK 2021
```

[127]:
```
print("opportunities")

worksheet = table.worksheet("opportunities")
rows = worksheet.get_all_values()
oname = list()
importance  = list()
possibility = list()
opower = list()
i=0
for row in rows:
  if(i>0):
    print (i, row)
    oname.append(row[0])
    importance .append(int(row[1]))
    possibility.append(float(row[2]))
    opower.append(float(row[2])*int(row[1]))
  i+=1
for j in range(len(oname)):
```

```
  print(oname[j],"\n", "importance: ",importance[j], "possibility: ",␣
 ↪possibility[j], "power: ", opower[j])
opportunities = sum(opower)
print("overall power: ", opportunities)
worksheet = table.worksheet("summary")
worksheet.update("B3",opportunities)
```

```
opportunities
1 ['  ', '5', '0.5', '2.5']
2 ['    ', '3', '0.6', '1.8']
3 ['  ', '10', '1', '10']
4 ['    ', '10', '1', '10']

 importance:  5 possibility:  0.5 power:  2.5

 importance:  3 possibility:  0.6 power:  1.7999999999999998

 importance:  10 possibility:  1.0 power:  10.0

 importance:  10 possibility:  1.0 power:  10.0
overall power:  24.3
```

[127]:
```
{'spreadsheetId': '1eyKAnrIGESkF_5K7kDg2xMZEr2xf2EvIV-tFhBDMhGg',
 'updatedCells': 1,
 'updatedColumns': 1,
 'updatedRange': 'summary!B3',
 'updatedRows': 1}
```

[ ]:
```
import matplotlib
matplotlib.use('Agg')
import matplotlib.pyplot as plt

def matplot(element):
    import matplotlib.pyplot as plt
    x=list()
    x_float=list()
    title=list()
    y_float=list()

    print('\n<!!--matplot_data')
    print('\n<br>')
    title = list(range(1,len(oname)+1))
    x=title
    x_float = list(range(1,len(oname)+1))
    #title.append(data['name'])
    result = opportunities
    y = opower
    y_float = opower
```

```
    print(x_float,title,y_float)
    x_pos=list()
    for i in range(x_float.__len__()):
        x_pos.append(i)
    print('<!--     \n', len( x_float), x_pos, y_float, ' -->\n')

    fig=plt.figure(figsize=(8,6), dpi=72)
    plt.bar(x_pos, y_float, width=0.75, align='edge', alpha=0.4)
    plt.xticks(x_pos,  x_float, fontsize=14)
    plt.xlabel('', fontsize=14)
    plt.ylabel(' ', fontsize=14)
    plt.title('opportunities', fontsize=14)
    plt.grid(True, color='r', linestyle='-', linewidth=2)
    #plt.draw()
    plt.show()
    fig.savefig("/content/drive/MyDrive/Colab Notebooks/swot/opportunities.png")
    print('<div class="d-flex flex-row ">')
    print('<div class="card m-1" style="width: 28rem;">',
          '<img  src="/content/drive/MyDrive/Colab Notebooks/swot/opportunities.
 ↪png" class="card-img-top" alt="...">',
          '<div class="card-body">')

    for i in range(title.__len__()):
        print(i+1, " - ", title[i], "; ")
        i += 1
    print('</div>', '</div>')
    print('<div>')
    !date


def  to_browser():
    print("Content-type:text/html\r\n")
    print('\n',
    '\n<html>\n<head>\n<title>SWOT</title>\n<meta charset="UTF-8">',
    '\n<meta name="viewport" content="width=device-width, initial-scale=1.0">',
    '\n<meta http-equiv="X-UA-Compatible" content="ie=edge">',
    '\n<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.
 ↪0.0-beta/css/bootstrap.min.css" integrity="sha384-/Y6pD6FV/
 ↪Vv2HJnA6t+vslU6fwYXjCFtcEpHbNJOlyAFsXTsjBbfaDjzALeQsN6M"␣
 ↪crossorigin="anonymous">',
    '\n</head>',
    '\n<body>',
    '\n<div class="container-md mx-3">'
    )

if __name__ == "__main__":
    #to_browser()
```

```
    element = 'swot_dictionary'
    matplot(element)
    #print("</div></body></html>",)
    !date
```

[ ]:
```
print("threats")

worksheet = table.worksheet("threats")
rows = worksheet.get_all_values()
tname = list()
importance  = list()
possibility = list()
tpower = list()
i=0
for row in rows:
  if(i>0):
    print (i, row)
    tname.append(row[0])
    importance .append(int(row[1]))
    possibility.append(float(row[2]))
    tpower.append(float(row[2])*int(row[1]))
  i+=1
for j in range(len(name)):
  print(tname[j],"\n", "importance: ",importance[j], "possibility: ",␣
 ↪possibility[j], "power: ", tpower[j])
threats = sum(tpower)
print("overall power: ", threats)
worksheet = table.worksheet("summary")
worksheet.update("B4",opportunities)
```

[ ]:
```
import matplotlib
matplotlib.use('Agg')
import matplotlib.pyplot as plt

def matplot(element):
    import matplotlib.pyplot as plt
    x=list()
    x_float=list()
    title=list()
    y_float=list()

    print('\n<!!--matplot_data')
    print('\n<br>')
    title = list(range(1,len(tname)+1))
    x=title
    x_float = list(range(1,len(tname)+1))
    #title.append(data['name'])
    result = threats
```

```
    y = tpower
    y_float = tpower
    print(x_float,title,y_float)
    x_pos=list()
    for i in range(x_float.__len__()):
        x_pos.append(i)
    print('<!--     \n', len( x_float), x_pos, y_float, ' -->\n')

    fig=plt.figure(figsize=(8,6), dpi=72)
    plt.bar(x_pos, y_float, width=0.75, align='edge', alpha=0.4)
    plt.xticks(x_pos,  x_float, fontsize=14)
    plt.xlabel('', fontsize=14)
    plt.ylabel(' ', fontsize=14)
    plt.title('threats', fontsize=14)
    plt.grid(True, color='r', linestyle='-', linewidth=2)
    #plt.draw()
    plt.show()
    fig.savefig("/content/drive/MyDrive/Colab Notebooks/swot/threats.png")
    print('<div class="d-flex flex-row ">')
    print('<div class="card m-1" style="width: 28rem;">',
          '<img  src="/content/drive/MyDrive/Colab Notebooks/swot/threats.png"␣
 ↪class="card-img-top" alt="...">',
          '<div class="card-body">')

    for i in range(title.__len__()):
        print(i+1, " - ", title[i], "; ")
        i += 1
    print('</div>', '</div>')
    print('<div>')
    !date


def  to_browser():
    print("Content-type:text/html\r\n")
    print('\n',
    '\n<html>\n<head>\n<title>SWOT</title>\n<meta charset="UTF-8">',
    '\n<meta name="viewport" content="width=device-width, initial-scale=1.0">',
    '\n<meta http-equiv="X-UA-Compatible" content="ie=edge">',
    '\n<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.
 ↪0.0-beta/css/bootstrap.min.css" integrity="sha384-/Y6pD6FV/
 ↪Vv2HJnA6t+vslU6fwYXjCFtcEpHbNJ0lyAFsXTsjBbfaDjzALeQsN6M"␣
 ↪crossorigin="anonymous">',
    '\n</head>',
    '\n<body>',
    '\n<div class="container-md mx-3">'
    )
```

```
if __name__ == "__main__":
    #to_browser()
    element = 'swot_dictionary'
    matplot(element)
    #print("</div></body></html>",)
    !date
```

[ ]:
```
import matplotlib
matplotlib.use('Agg')
import matplotlib.pyplot as plt
import json

def matplot(element):
    import matplotlib.pyplot as plt
    x=list()
    x_float=list()
    title=list()
    y_float=list()

    print('\n<!!--matplot_data')
    print('\n<br>')
    title = [ "strengths", "weaknesses", "opportunities", "threats", "result"]
    x=title
    x_float = [ "strengths", "weaknesses", "opportunities", "threats", "result"]
    #title.append(data['name'])
    result = strengths- weaknesses +opportunities -threats
    y = [strengths, weaknesses, opportunities, threats]
    y_float = [strengths, -weaknesses, opportunities, -threats,result]
    print(x_float,title,y_float)
    x_pos=list()
    for i in range(x_float.__len__()):
        x_pos.append(i)
    print('<!--     \n', len( x_float), x_pos, y_float, ' -->\n')

    fig=plt.figure(figsize=(8,6), dpi=72)
    plt.bar(x_pos, y_float, width=0.75, align='edge', alpha=0.4)
    plt.xticks(x_pos,  x_float, fontsize=11)
    plt.xlabel('', fontsize=14)
    plt.ylabel(' ', fontsize=14)
    plt.title('SWOT', fontsize=14)
    plt.grid(True, color='r', linestyle='-', linewidth=2)
    #plt.draw()
    plt.show()
    fig.savefig("/content/drive/MyDrive/Colab Notebooks/swot/overall.png")
    print('<div class="d-flex flex-row ">')
    print('<div class="card m-1" style="width: 28rem;">',
```

```
          '<img  src="/content/drive/MyDrive/Colab Notebooks/swot/overall.png"␣
 ↪class="card-img-top" alt="...">',
          '<div class="card-body">')

    for i in range(title.__len__()):
        print(i+1, " - ", title[i], "; ")
        i += 1
    print('</div>', '</div>')
    print('<div>')
    !date


def  to_browser():
    print("Content-type:text/html\r\n")
    print('\n',
    '\n<html>\n<head>\n<title>SWOT</title>\n<meta charset="UTF-8">',
    '\n<meta name="viewport" content="width=device-width, initial-scale=1.0">',
    '\n<meta http-equiv="X-UA-Compatible" content="ie=edge">',
    '\n<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.
 ↪0.0-beta/css/bootstrap.min.css" integrity="sha384-/Y6pD6FV/
 ↪Vv2HJnA6t+vslU6fwYXjCFtcEpHbNJ0lyAFsXTsjBbfaDjzALeQsN6M"␣
 ↪crossorigin="anonymous">',
    '\n</head>',
    '\n<body>',
    '\n<div class="container-md mx-3">'
    )

if __name__ == "__main__":
    #to_browser()
    element = 'swot_dictionary'
    matplot(element)
    #print("</div></body></html>",)
    !date
```

[ ]:
```
!apt-get install texlive texlive-xetex texlive-latex-extra pandoc
!pip install pypandoc
```

[ ]:
```
!jupyter nbconvert --to pdf "/content/drive/MyDrive/Colab Notebooks/swot.ipynb"
```