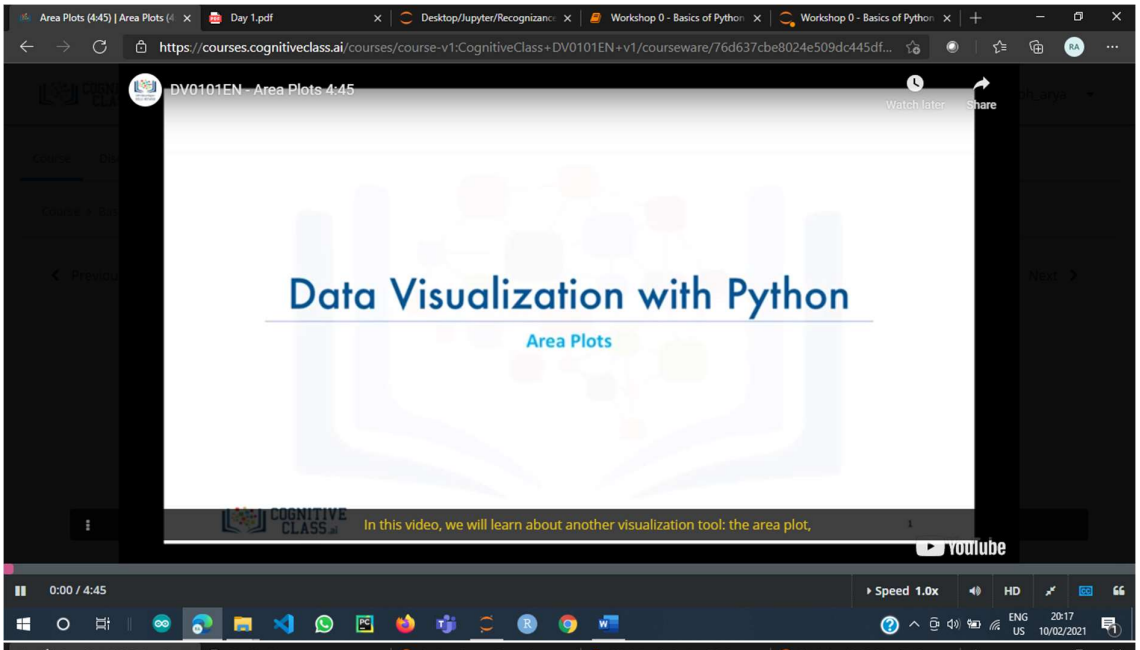
DV0101EN - Area Plots 4:45
Watch later
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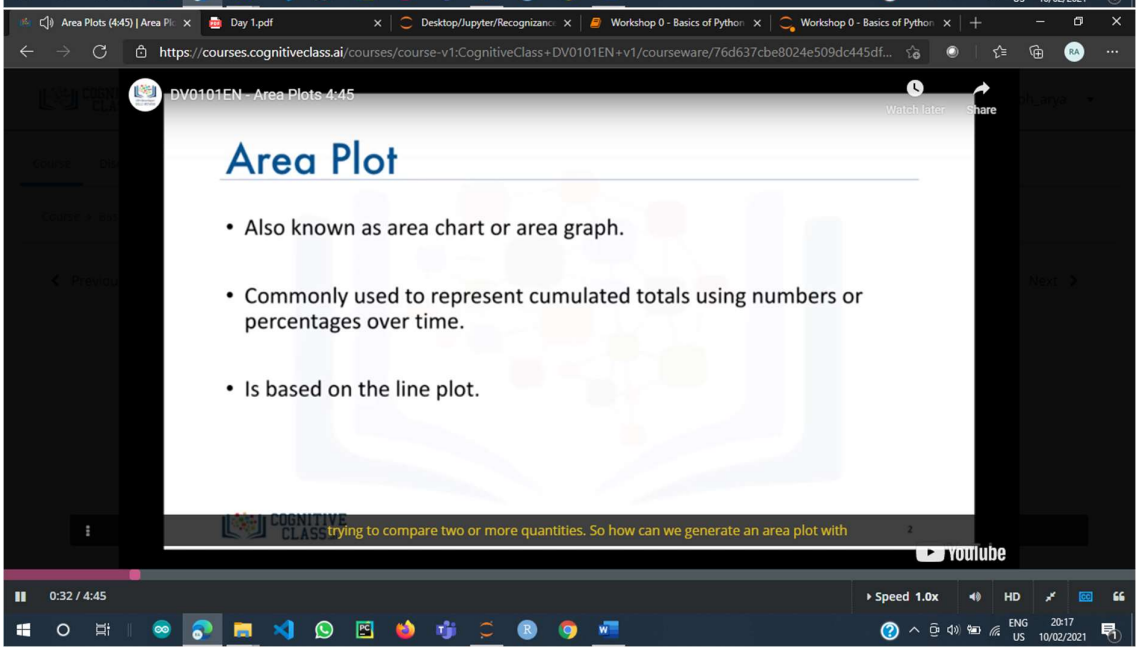
Data Visualization with Python
Area Plots
In this video, we will learn about another visualization tool: the area plot,
0:00 / 4:45
Speed 1.0x
HD


DV0101EN - Area Plots 4:45
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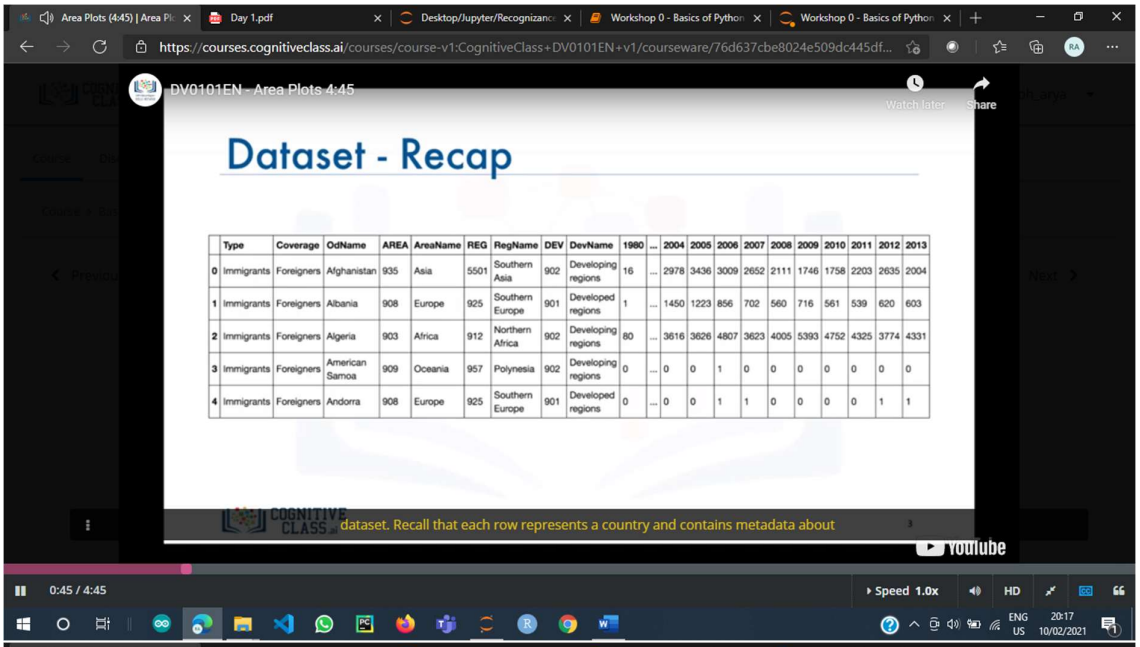
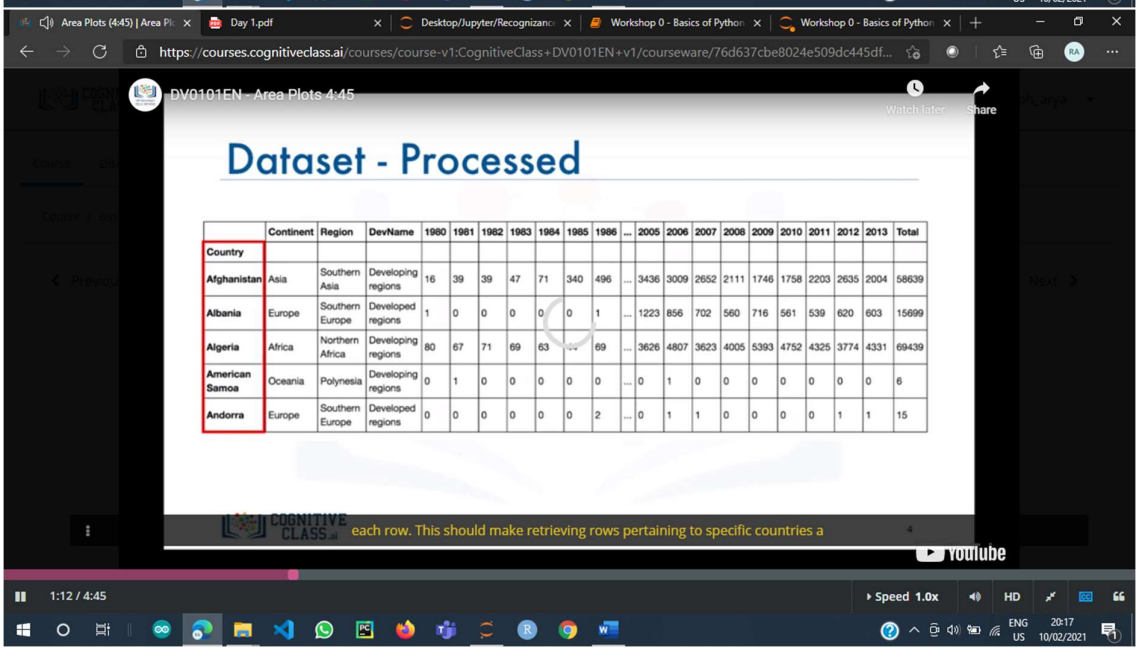
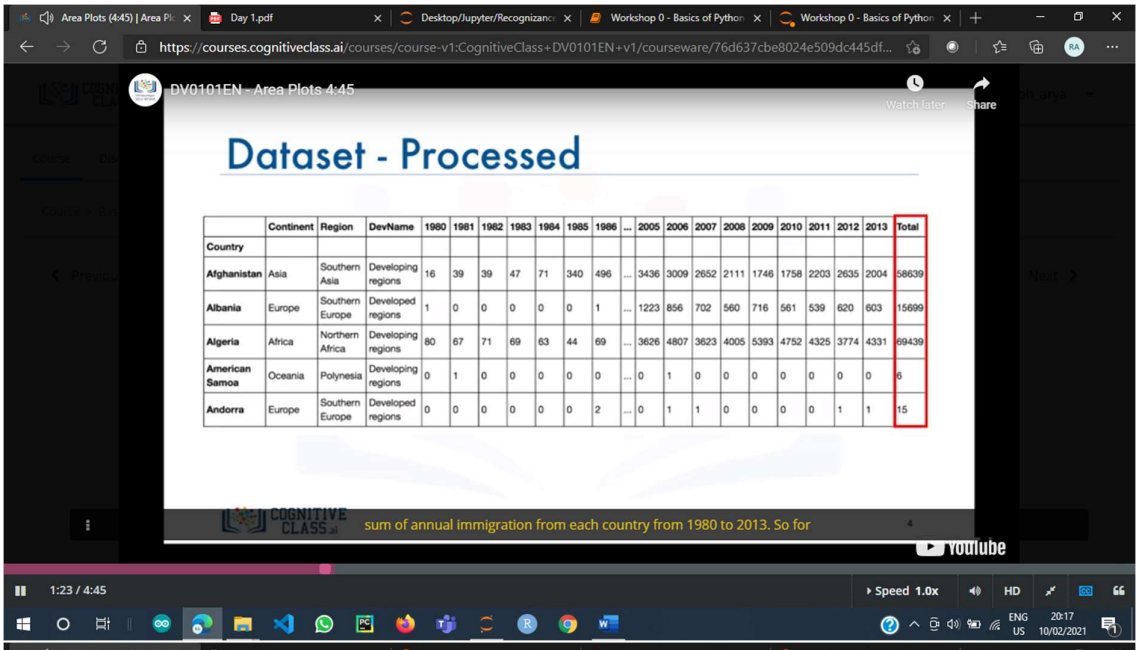
Area Plot
• Also known as area chart or area graph.
• Commonly used to represent cumulated totals using numbers or percentages over time.
• Is based on the line plot.
trying to compare two or more quantities. So how can we generate an area plot with
0:32 / 4:45
Speed 1.0x
HD



	Type	Coverage	OdName	AREA	AreaName	REG	RegName	DEV	DevName	1980	...	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
0	Immigrants	Foreigners	Afghanistan	935	Asia	5501	Southern Asia	902	Developing regions	16	...	2978	3436	3009	2652	2111	1746	1758	2203	2635	2004
1	Immigrants	Foreigners	Albania	908	Europe	925	Southern Europe	901	Developed regions	1	...	1450	1223	856	702	560	716	561	539	620	603
2	Immigrants	Foreigners	Algeria	903	Africa	912	Northern Africa	902	Developing regions	80	...	3616	3626	4807	3623	4005	5393	4752	4325	3774	4331
3	Immigrants	Foreigners	American Samoa	909	Oceania	957	Polynesia	902	Developing regions	0	...	0	0	1	0	0	0	0	0	0	0
4	Immigrants	Foreigners	Andorra	908	Europe	925	Southern Europe	901	Developed regions	0	...	0	0	1	1	0	0	0	0	1	1



	Continent	Region	DevName	1980	1981	1982	1983	1984	1985	1986	...	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Country																					
Afghanistan	Asia	Southern Asia	Developing regions	16	39	39	47	71	340	496	...	3436	3009	2652	2111	1746	1758	2203	2635	2004	58639
Albania	Europe	Southern Europe	Developed regions	1	0	0	0	0	0	1	...	1223	856	702	560	716	561	539	620	603	15699
Algeria	Africa	Northern Africa	Developing regions	80	67	71	69	63	...	69	...	3626	4807	3623	4005	5393	4752	4325	3774	4331	69439
American Samoa	Oceania	Polynesia	Developing regions	0	1	0	0	0	0	0	...	0	1	0	0	0	0	0	0	0	6
Andorra	Europe	Southern Europe	Developed regions	0	0	0	0	0	0	2	...	0	1	1	0	0	0	0	1	1	15



	Continent	Region	DevName	1980	1981	1982	1983	1984	1985	1986	...	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
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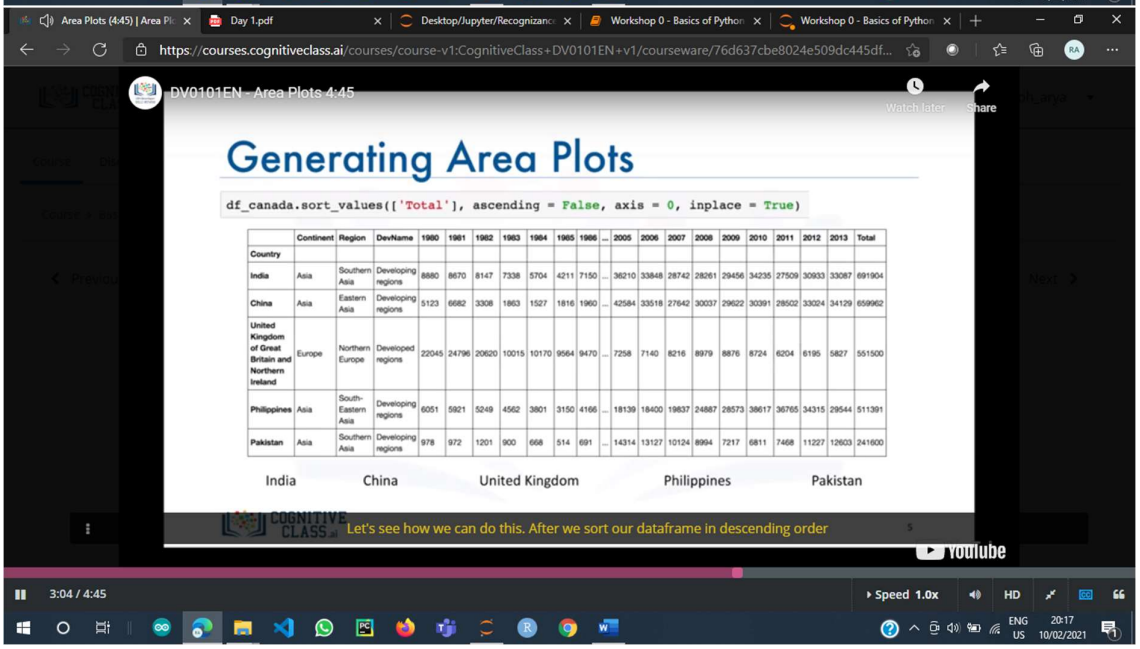
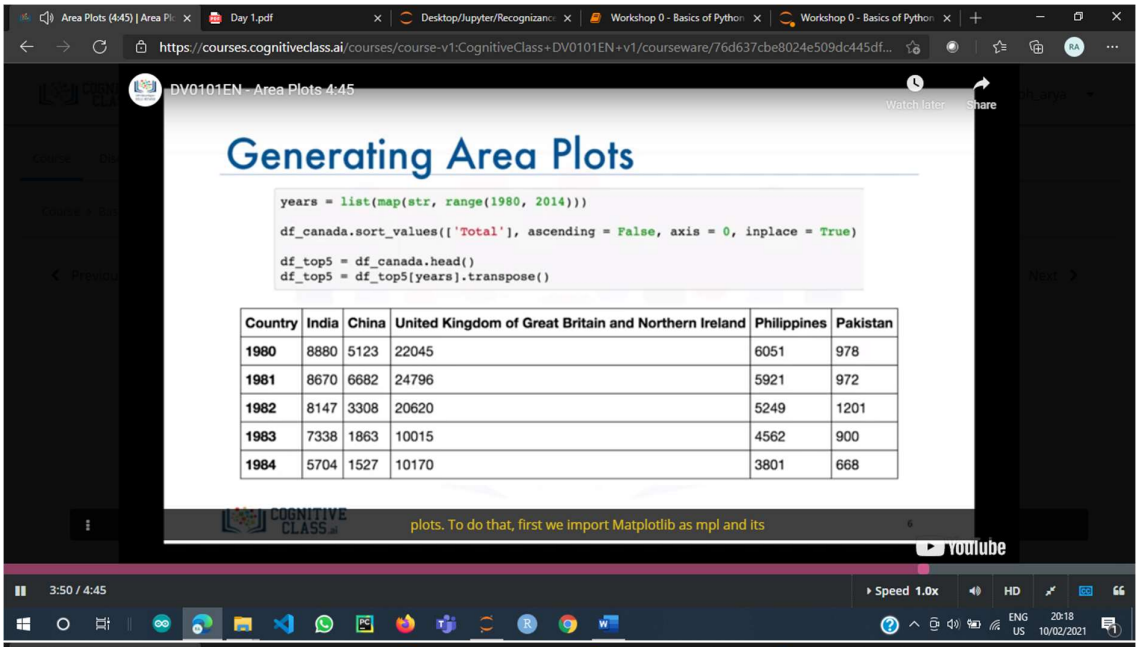
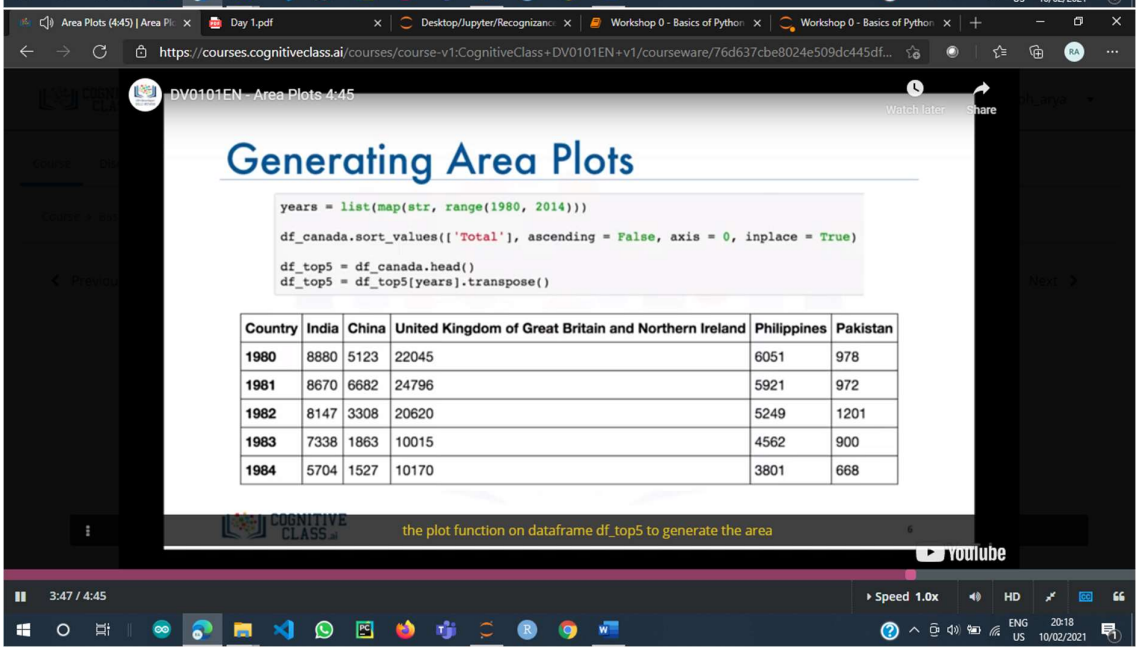
American Samoa	Oceania	Polynesia	Developing regions	0	1	0	0	0	0	0	...	0	1	0	0	0	0	0	0	0	6
Andorra	Europe	Southern Europe	Developed regions	0	0	0	0	0	0	2	...	0	1	1	0	0	0	0	1	1	15



	Continent	Region	DevName	1980	1981	1982	1983	1984	1985	1986	...	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Country																					
India	Asia	Southern Asia	Developing regions	8880	8670	8147	7338	5704	4211	7150	...	36210	33848	28742	28261	29456	34235	27509	30933	33087	691904
China	Asia	Eastern Asia	Developing regions	5123	6682	3308	1863	1527	1816	1960	...	42584	33518	27642	30037	29622	30391	28502	33024	34129	659962
United Kingdom of Great Britain and Northern Ireland	Europe	Northern Europe	Developed regions	22045	24796	20620	10015	10170	9564	9470	...	7258	7140	8216	8979	8876	8724	6204	6195	5827	551500
Philippines	Asia	South-Eastern Asia	Developing regions	6051	5921	5249	4562	3801	3150	4166	...	18139	18400	19837	24887	28573	38617	36765	34315	29544	511391
Pakistan	Asia	Southern Asia	Developing regions	978	972	1201	900	668	514	691	...	14314	13127	10124	8994	7217	6811	7468	11227	12603	241600


DV0101EN - Area Plots 4:45
Generating Area Plots
years = list(map(str, range(1980, 2014)))
df_canada.sort_values(['Total'], ascending = False, axis = 0, inplace = True)
df_top5 = df_canada.head()
df_top5 = df_top5[years].transpose()
Country | India | China | United Kingdom of Great Britain and Northern Ireland | Philippines | Pakistan
1980 | 8880 | 5123 | 22045 | 6051 | 978
1981 | 8670 | 6682 | 24796 | 5921 | 972
1982 | 8147 | 3308 | 20620 | 5249 | 1201
1983 | 7338 | 1863 | 10015 | 4562 | 900
1984 | 5704 | 1527 | 10170 | 3801 | 668
plots. To do that, first we import Matplotlib as mpl and its
3:50 / 4:45
Speed 1.0x
HD


DV0101EN - Area Plots 4:45
Generating Area Plots
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Country | India | China | United Kingdom of Great Britain and Northern Ireland | Philippines | Pakistan
1980 | 8880 | 5123 | 22045 | 6051 | 978
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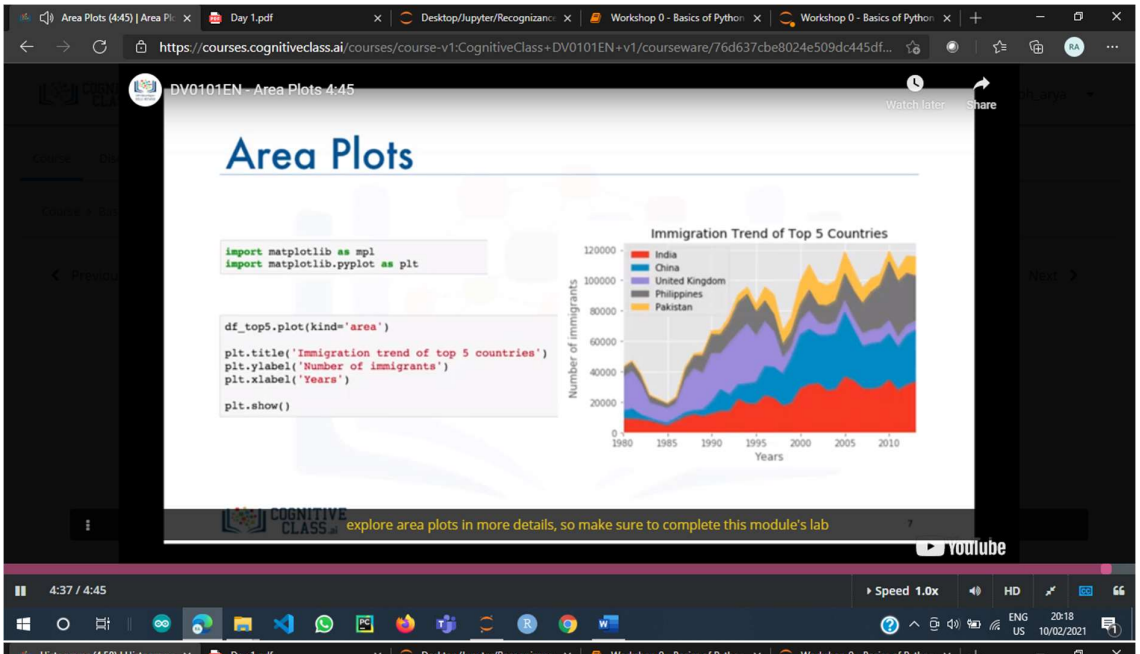
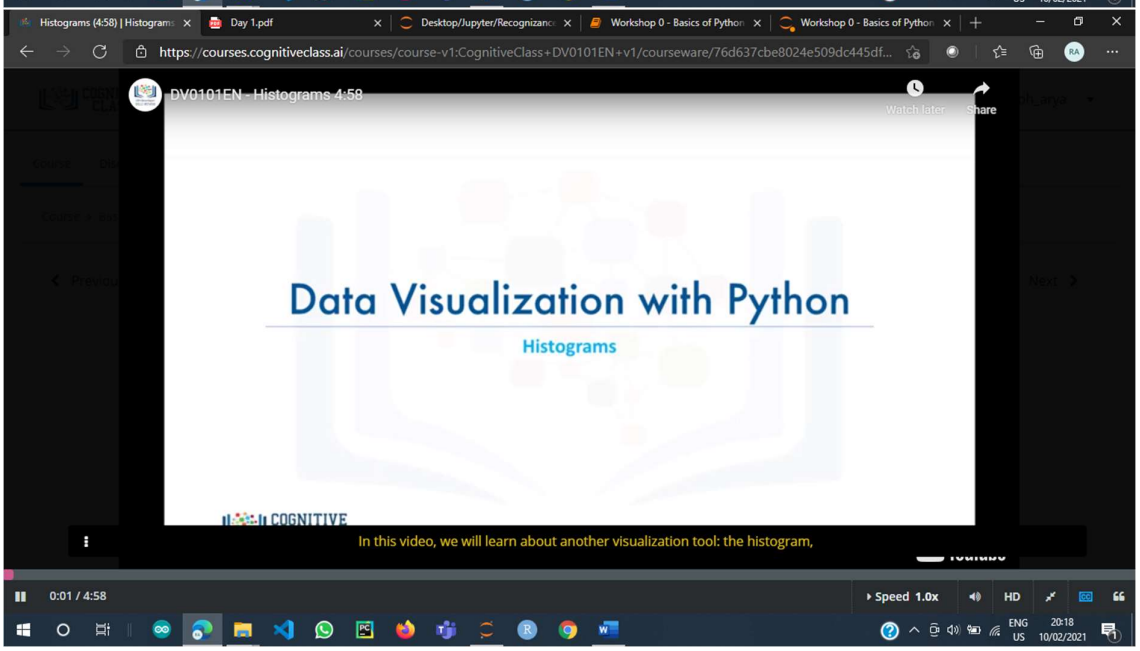
1982 | 8147 | 3308 | 20620 | 5249 | 1201
1983 | 7338 | 1863 | 10015 | 4562 | 900
1984 | 5704 | 1527 | 10170 | 3801 | 668
the plot function on dataframe df_top5 to generate the area
3:47 / 4:45
Speed 1.0x
HD


DV0101EN - Area Plots 4:45
Watch later
Share
Area Plots
import matplotlib as mpl
import matplotlib.pyplot as plt
df_top5.plot(kind='area')
plt.title('Immigration trend of top 5 countries')
plt.ylabel('Number of immigrants')
plt.xlabel('Years')
plt.show()
Immigration Trend of Top 5 Countries
India
China
United Kingdom
Philippines
Pakistan
Number of immigrants
Years
explore area plots in more details, so make sure to complete this module's lab
4:37 / 4:45
Speed 1.0x
HD


DV0101EN - Histograms 4:58
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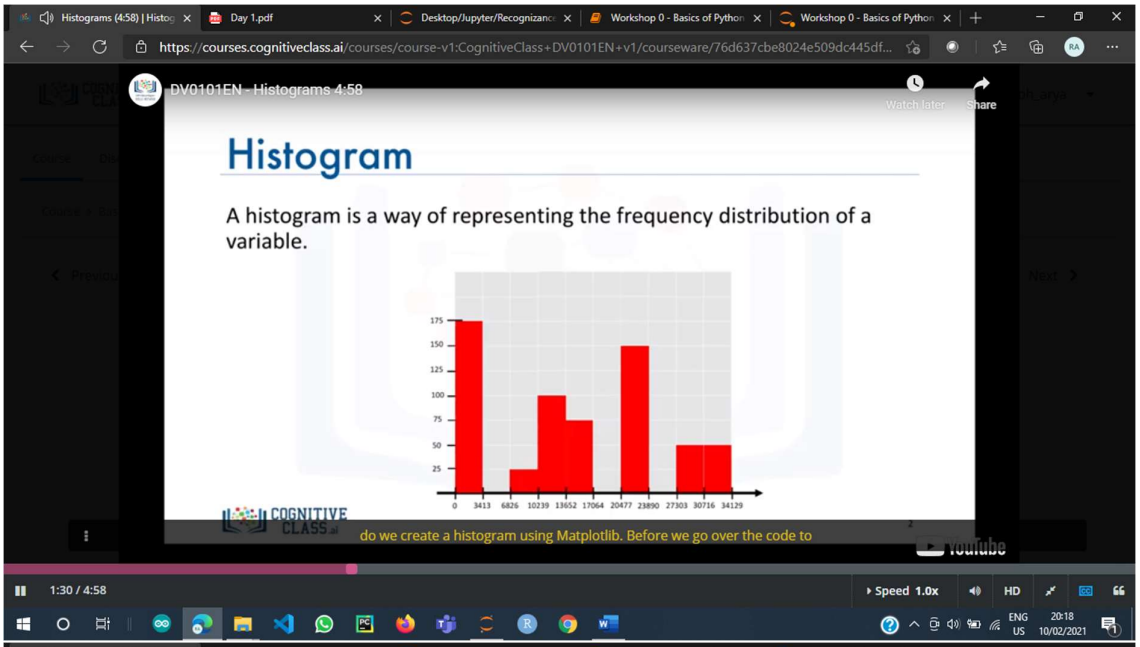
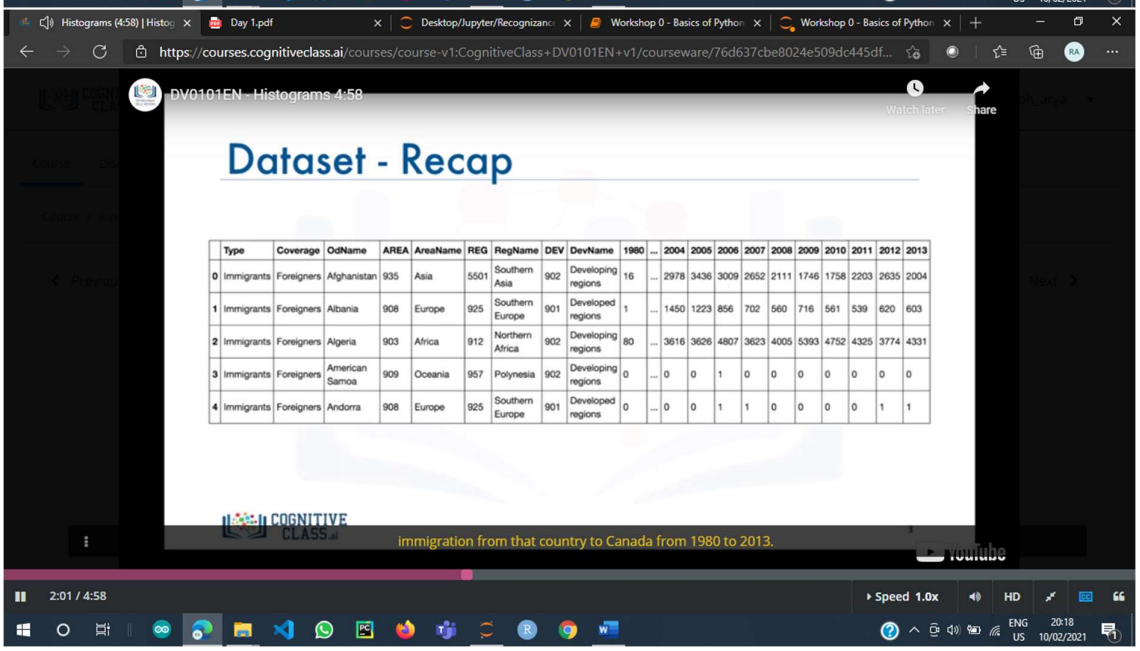
Data Visualization with Python
Histograms
In this video, we will learn about another visualization tool: the histogram,
0:01 / 4:58
Speed 1.0x
HD





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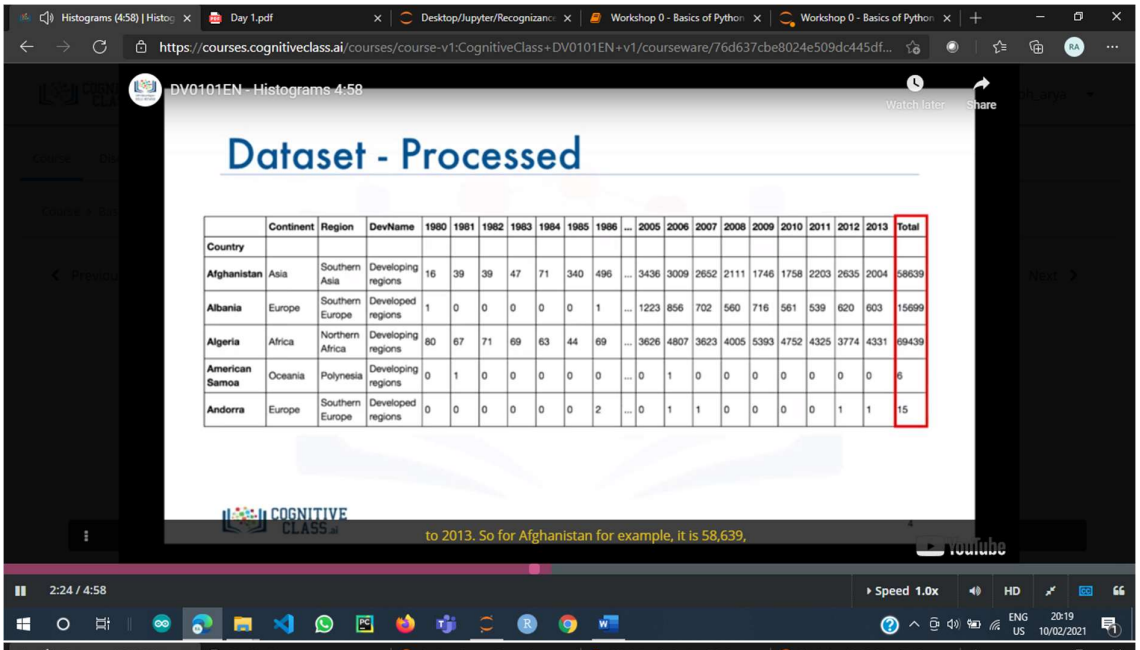
3	Immigrants	Foreigners	American Samoa	909	Oceania	957	Polynesia	902	Developing regions	0	...	0	0	1	0	0	0	0	0	0	0
4	Immigrants	Foreigners	Andorra	908	Europe	925	Southern Europe	901	Developed regions	0	...	0	0	1	1	0	0	0	0	1	1



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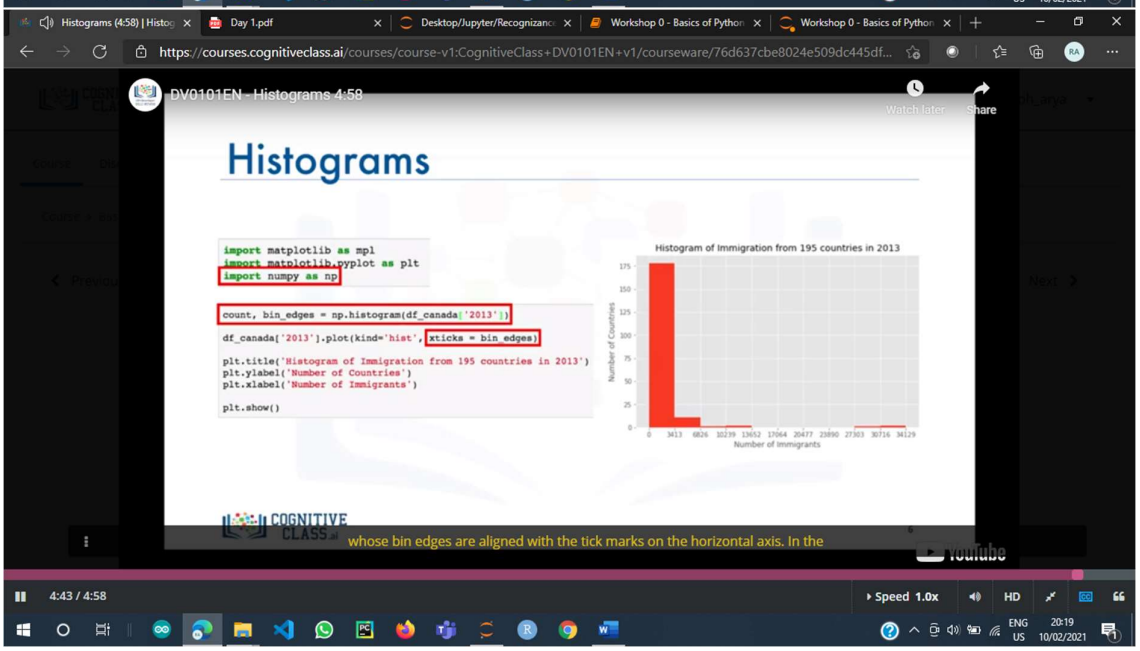
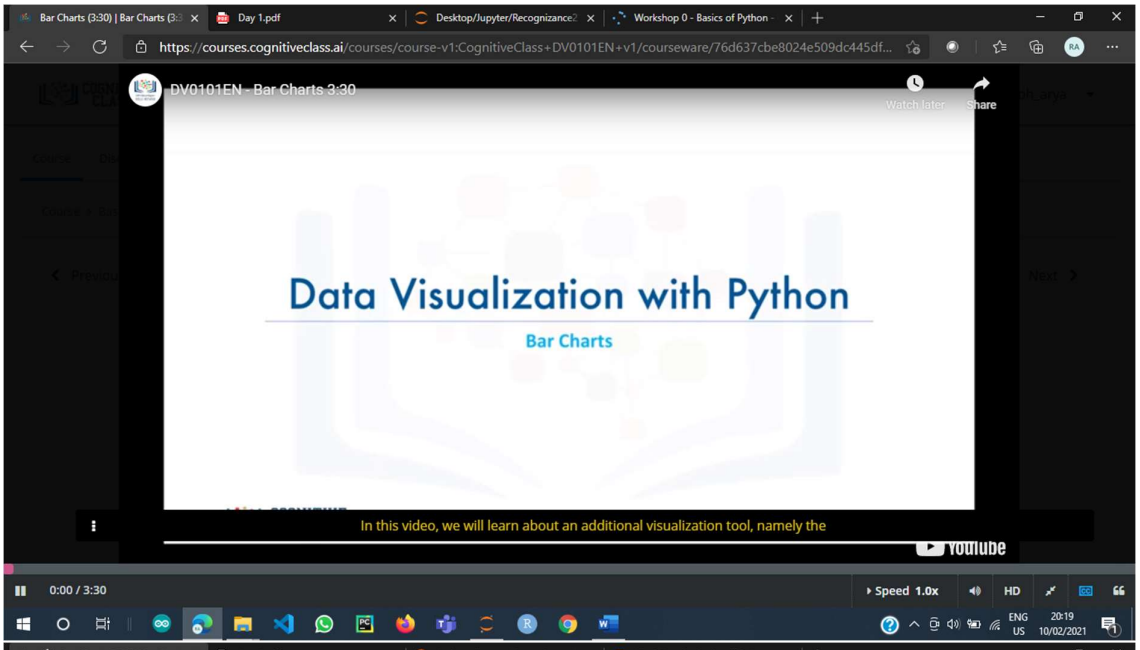
American Samoa	Oceania	Polynesia	Developing regions	0	1	0	0	0	0	0	...	0	1	0	0	0	0	0	0	0	6
Andorra	Europe	Southern Europe	Developed regions	0	0	0	0	0	0	2	...	0	1	1	0	0	0	0	1	1	15




Bar Charts (3:30) | Bar Charts (3:
Day 1.pdf
Desktop/Jupyter/Recognizance2
Workshop 0 - Basics of Python
https://courses.cognitiveclass.ai/courses/course-v1:CognitiveClass+DV0101EN+v1/courseware/76d637cbe8024e509dc445df...
DV0101EN - Bar Charts 3:30
Watch later
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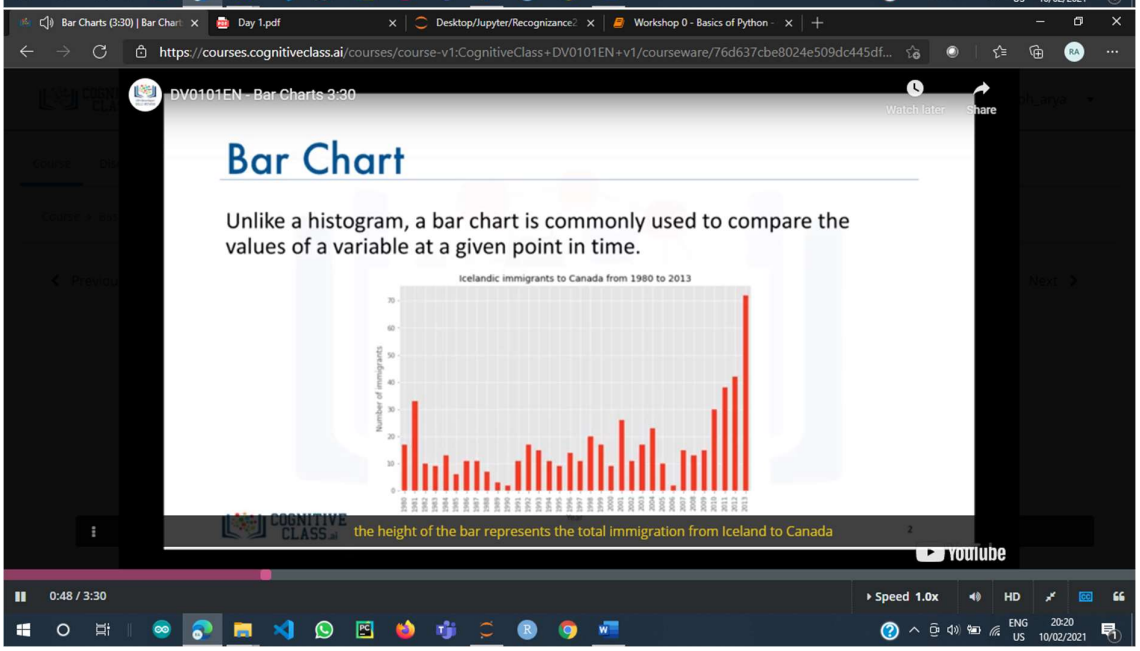
Data Visualization with Python
Bar Charts
In this video, we will learn about an additional visualization tool, namely the
0:00 / 3:30
Speed 1.0x
HD
ENG
US
20:19
10/02/2021


Bar Charts (3:30) | Bar Chart
Day 1.pdf
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DV0101EN - Bar Charts 3:30
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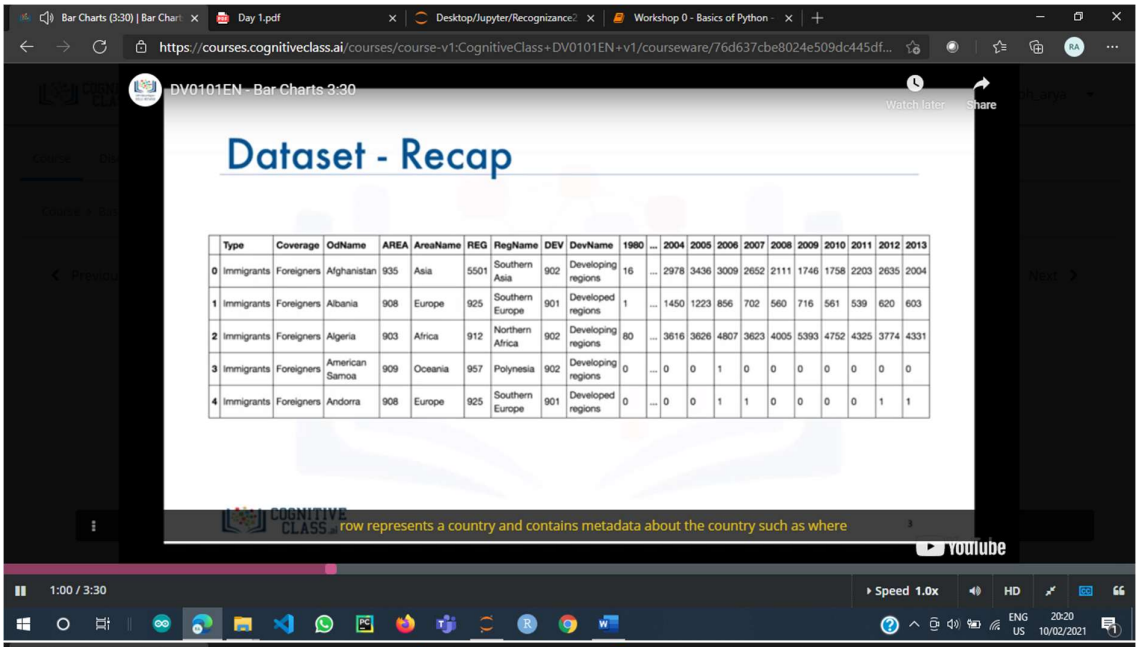
Bar Chart
Unlike a histogram, a bar chart is commonly used to compare the values of a variable at a given point in time.
Icelandic immigrants to Canada from 1980 to 2013
Number of immigrants
the height of the bar represents the total immigration from Iceland to Canada
0:48 / 3:30
Speed 1.0x
HD
ENG
US
20:20
10/02/2021



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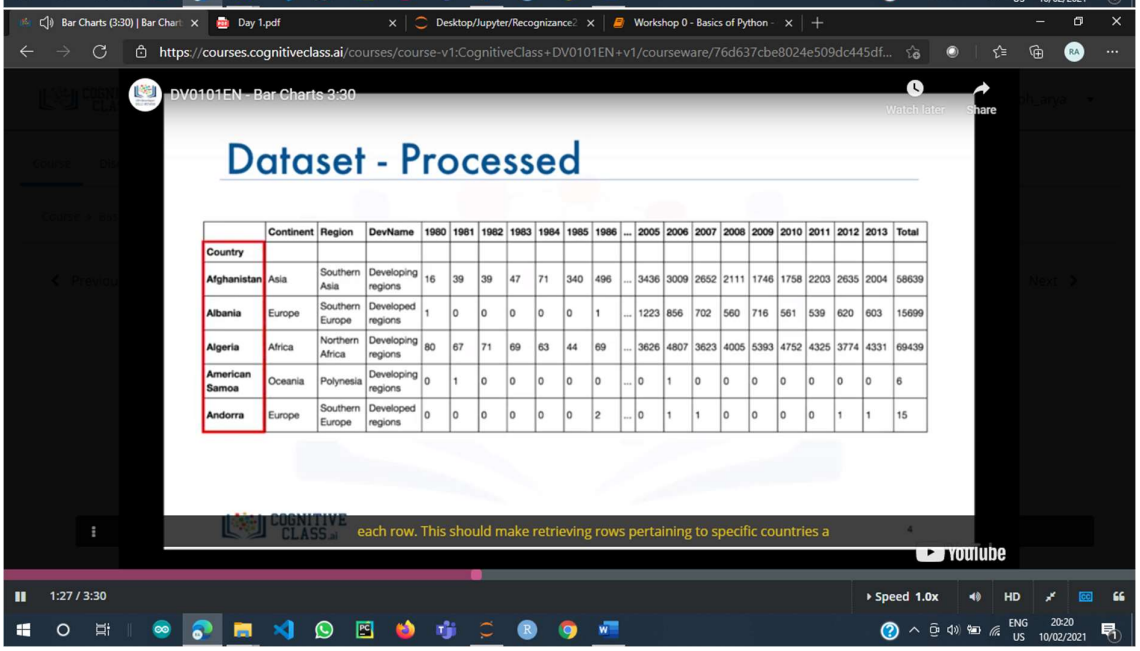

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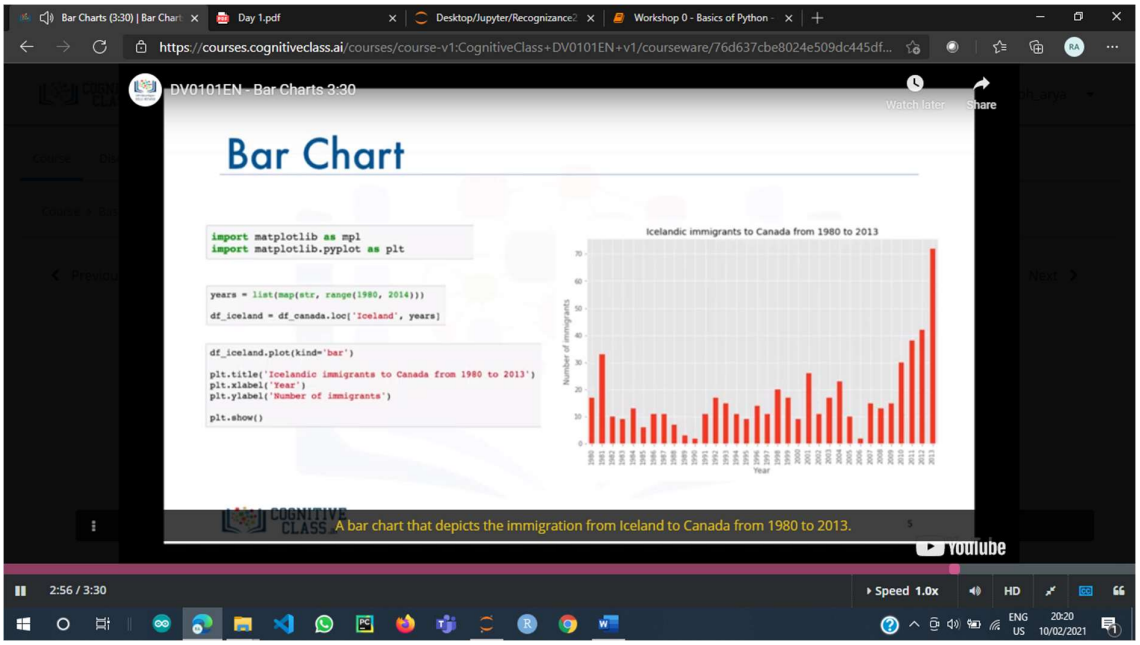
American Samoa	Oceania	Polynesia	Developing regions	0	1	0	0	0	0	0	...	0	1	0	0	0	0	0	0	0	6
Andorra	Europe	Southern Europe	Developed regions	0	0	0	0	0	0	2	...	0	1	1	0	0	0	0	1	1	15


Bar Charts (3:30) | Bar Chart
Day 1.pdf
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DV0101EN - Bar Charts 3:30
Watch later
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Bar Chart
import matplotlib as mpl
import matplotlib.pyplot as plt
years = list(map(str, range(1980, 2014)))
df_iceland = df_canada.loc['Iceland', years]
df_iceland.plot(kind='bar')
plt.title('Icelandic immigrants to Canada from 1980 to 2013')
plt.xlabel('Year')
plt.ylabel('Number of immigrants')
plt.show()
Icelandic immigrants to Canada from 1980 to 2013
Number of immigrants
Year
COGNITIVE CLASS
A bar chart that depicts the immigration from Iceland to Canada from 1980 to 2013.
YouTube
2:56 / 3:30
Speed 1.0x
HD
ENG
US
20:20
10/02/2021