

UTMLead: Online Learning Training

Dr Farhan bin Mohamed

School of Computing | MaGICX-iHumen | Corporate Affairs

Universiti Teknologi Malaysia



ONLINE LEARNING TRAINING



**03/09/2020
THURSDAY**

Teaching 'Skills-related Course' Online

Dr. Farhan Mohamed

10am - 11am

Webex Platform
Link: <http://gg.gg/klban>
Password: 7CKffrHAJ37



 **5 Star** QS Overall Rating
 **TOP 50** Best Universities in Asia
 **TOP 20** Universities under 50 years of establishment

www.utm.my |  [uniteknologi/malaysia](https://www.linkedin.com/company/universititeknologi-malaysia)
[utm_my](https://www.facebook.com/utm.my)
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My four ingredients in teaching and learning **programming** throughout the “lockdown”

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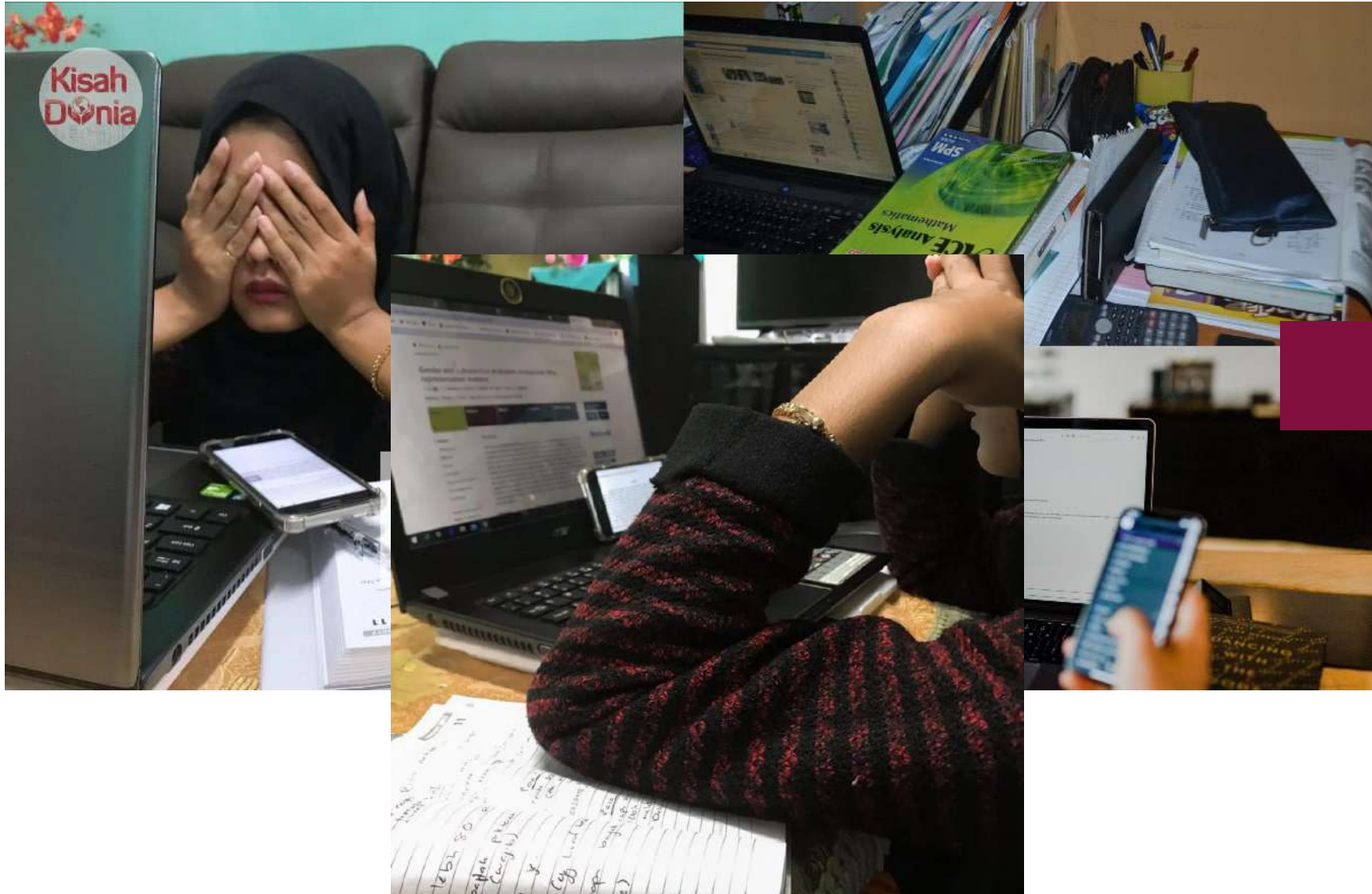
Theories:

Picciano, A. G. (2017). Theories and frameworks for online education: Seeking an integrated model. *Online Learning*, 21(3), 166-190.

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). **The difference between emergency remote teaching and online learning**. *Educause Review*, 27.

My four ingredients in teaching and learning programming throughout the “lockdown”

A. Why?



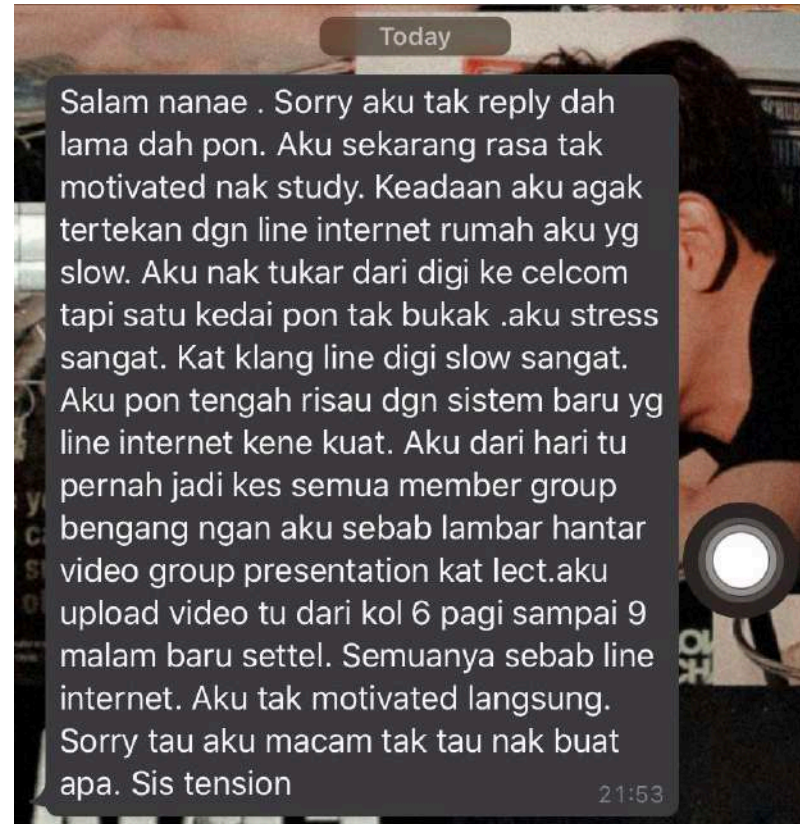
Equipments



Gramir Xhazril

@amirazril_

Harap harap ramai la perasan tweet aku ni. Fyi, ramai student dah mula mental breakdown hadap online class ni. Nak tahu sebab apa? Assessment yang terlampau banya, due date singkat, material limited, source limited. So ada apa apa solution untuk mudah and lancarkan online class?



Coping Changes

 By Christy Yip

 By Ruth Smalley

29 Apr 2020 01:08PM
(Updated: 30 Apr 2020 03:42PM)



Bookmark



CNA Insider

Home-based learning blues: Life in a rental flat during the COVID-19 circuit breaker

What the past two weeks of staying home 24/7 has been like for four Singaporean families living in one- and two-room flats.



Tina's two primary school-going children, one son in Secondary 4 and a daughter in polytechnic have to manage home-based learning in their two-room rental flat.

SINGAPORE: It is 9am and Ella is about to attend her first lecture as a polytechnic student.

Environment

NEWS

Home | US Election | Coronavirus | Video | World | Asia | UK | Business | Tech | Science | Stories

News from Elsewhere

Malaysian student sits exams in a tree to ensure good wifi

By News from Elsewhere...
...as found by BBC Monitoring

18 June



YOUTUBE/VEVEONAH M.

Science student Veveonah Mosibin completed two tests in a treetop then slept there when it got dark

A university student in Malaysia who went out on a limb to ensure she had a good internet connection to sit her exams online has impressed many with her resourcefulness.

Eighteen-year-old Veveonah Mosibin lives in Sabanalang Pitas village, in a remote part of the eastern state of Sabah, where **broadband services are limited.**

There is **no electricity or running water in her house** and Ms Mosibin has said she charges her mobile phone at the houses of relatives and neighbours who do have electricity.

She had prepared for her tests a fortnight previously by building a small shelter on a hill where 3G reception for the area is good.

Rural Challenges

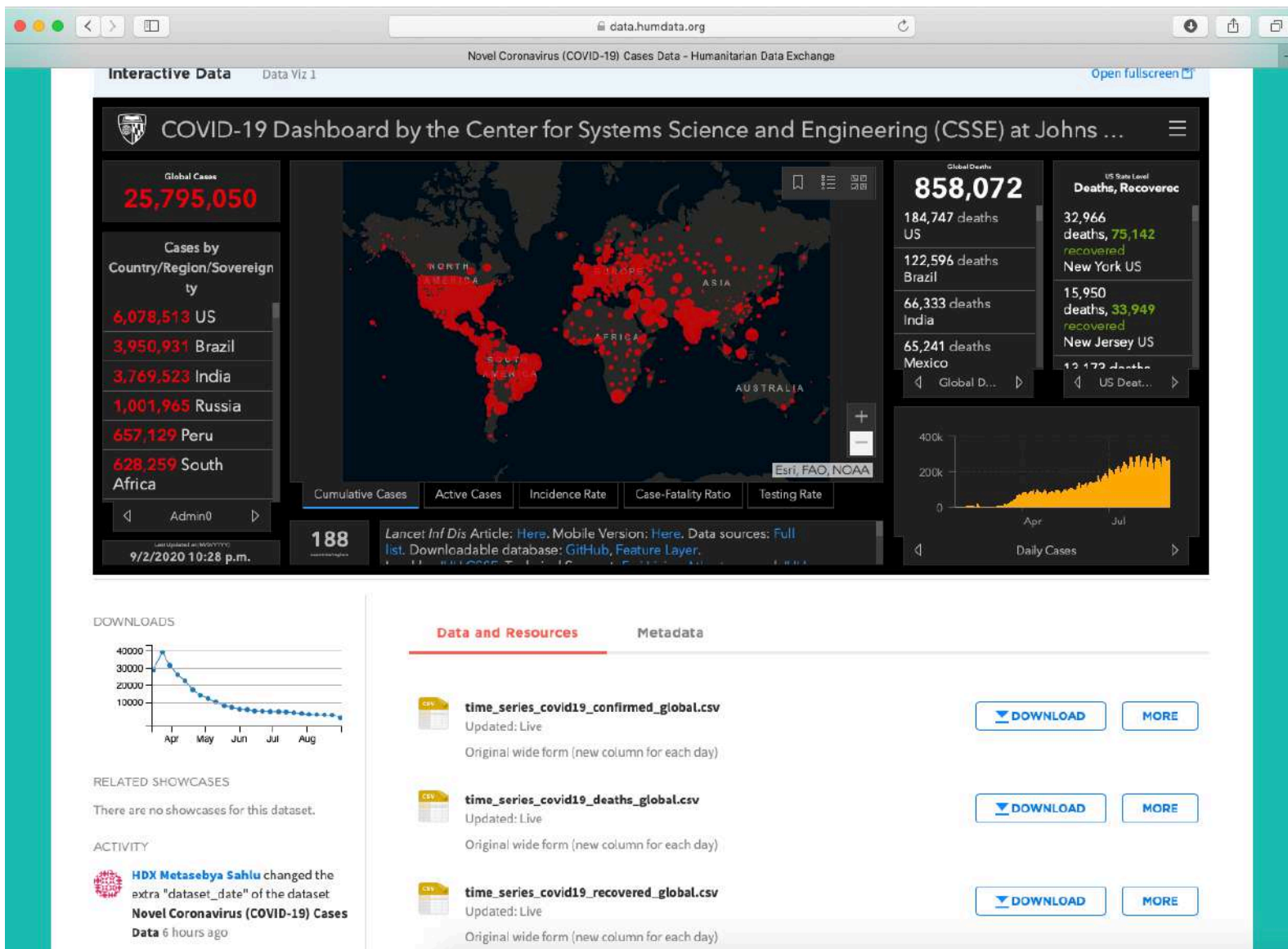
My four ingredients in teaching and learning programming throughout the “lockdown”

B. How?



1. COVID19 Dataset





Of interest & Trusted

time_series_covid19_confirmed_global.csv

URL: https://data.humdata.org/hxlproxy/api/data-preview.csv?url=https%3A%2F%2Fraw.githubusercontent.com%2FCSSEGISandData%2FCOVID-19%2Fmaster%2Fcsse_covid_19_data%2Fcsse_covid_19_time_series%2Ftime_series_covid19_confirmed_global.csv&filename=time_series_covid19_confirmed_global.csv

Original wide form (new column for each day)

Data Explorer

Grid	Graph	Map	266 records		«	1	–	100	»	Search data ...	Go »	Filters		
18/20	8/19/20	8/20/20	8/21/20	8/22/20	8/23/20	8/24/20	8/25/20	8/26/20	8/27/20	8/28/20	8/29/20	8/30/20	8/31/20	9/1/20
39	37599	37856	37894	37953	37999	38054	38070	38113	38129	38140	38143	38162	38165	38196
4	7812	7967	8119	8275	8427	8605	8759	8927	9083	9195	9279	9380	9513	9606
14	39847	40258	40667	41068	41460	41858	42228	42619	43016	43403	43781	44146	44494	44833
5	1024	1024	1045	1045	1045	1060	1060	1098	1098	1124	1124	1124	1176	1184
5	2015	2044	2068	2134	2171	2222	2283	2332	2415	2471	2551	2624	2654	2729
	94	94	94	94	94	94	94	94	94	94	94	94	94	94
366	312659	320884	329043	336802	342154	350867	359638	370188	380292	392009	401239	408426	417735	428239
46	42056	42319	42477	42616	42792	42825	42936	43067	43270	43451	43626	43750	43781	43878
	113	113	113	113	113	113	113	113	113	113	113	113	113	113
5	3971	3972	3981	3985	3988	3991	3997	4006	4019	4033	4040	4050	4063	4079
	33	33	33	33	33	33	33	33	33	33	33	33	33	33
2	1093	1094	1103	1105	1106	1106	1107	1110	1113	1117	1121	1122	1124	1126
	462	462	462	462	463	463	463	463	463	463	463	463	463	463
	230	230	230	230	230	230	230	230	230	230	230	230	230	230
46	17683	17852	18029	18231	18330	18464	18608	18714	18822	18903	19015	19080	19138	19224
	651	651	651	652	652	653	653	653	655	655	655	655	655	655

Formatted & Daily Updates

1. COVID19 Dataset

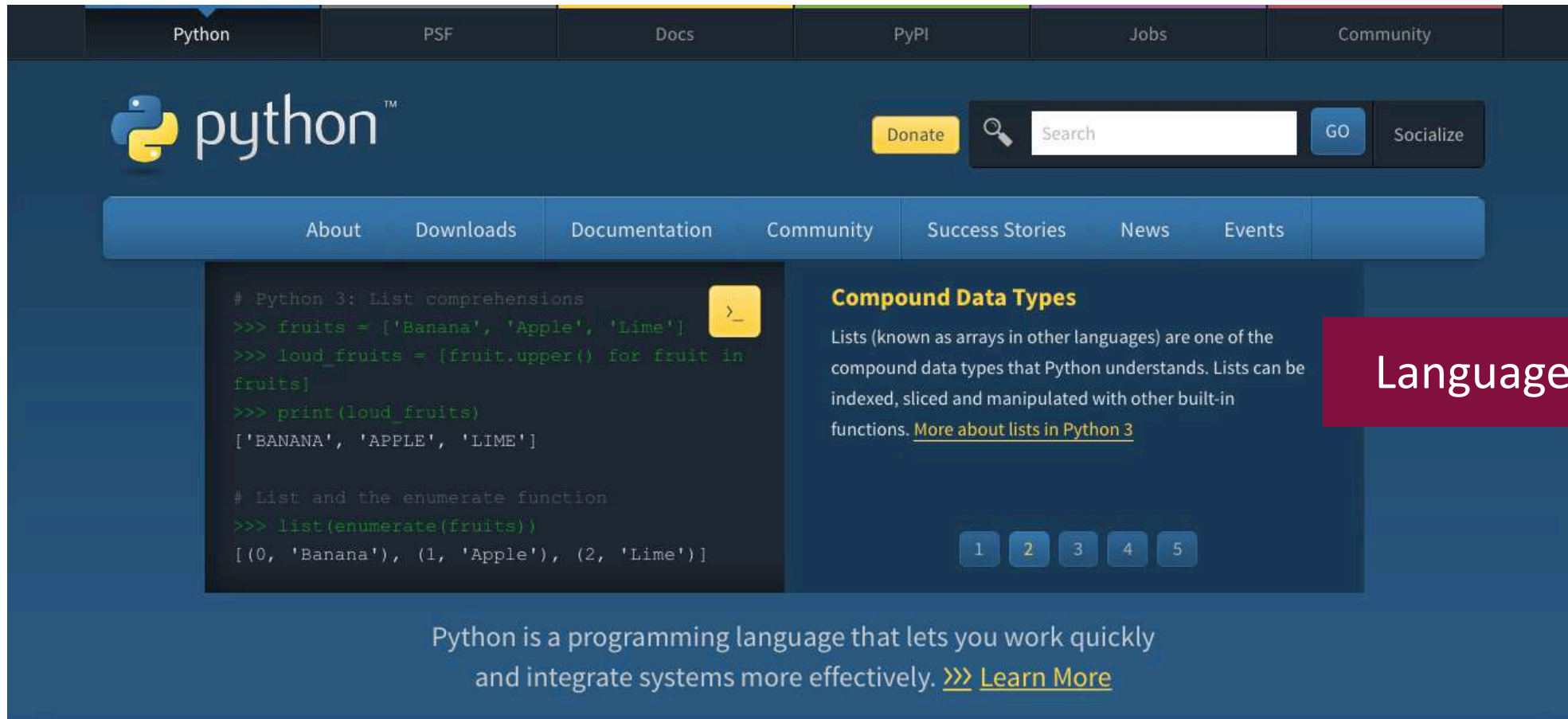
Explore

Active

2. Python Programming

Reliable

Asynchronous



The screenshot shows the Python.org website with a dark blue header and navigation menu. The main content area features a code editor on the left and a text explanation on the right. The code editor shows a list comprehension example that converts a list of lowercase fruit names to uppercase. The text explanation describes lists as compound data types and provides a link to learn more about lists in Python 3. A pagination bar at the bottom of the text area shows page numbers 1 through 5, with page 2 selected. A dark red banner on the right side of the image contains the text 'Language of the Day'.

Python

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python™

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```
# Python 3: List comprehensions
>>> fruits = ['Banana', 'Apple', 'Lime']
>>> loud_fruits = [fruit.upper() for fruit in
fruits]
>>> print(loud_fruits)
['BANANA', 'APPLE', 'LIME']

# List and the enumerate function
>>> list(enumerate(fruits))
[(0, 'Banana'), (1, 'Apple'), (2, 'Lime')]
```

Compound Data Types

Lists (known as arrays in other languages) are one of the compound data types that Python understands. Lists can be indexed, sliced and manipulated with other built-in functions. [More about lists in Python 3](#)

1 2 3 4 5

Python is a programming language that lets you work quickly and integrate systems more effectively. >>> [Learn More](#)

Language of the Day

Visit the [COVID-19 resources hub](#) for a calendar of IEEE virtual events and access to free offerings.

Departments | At Work | Tech Careers

22 Jul 2020 | 18:15 GMT

Top Programming Languages 2020

Python rules the roost, but Cobol gets a pandemic bump

 By **Stephen Cass**


Explore the Interactive Rankings

It would be an understatement to say it's been a turbulent year since the last time *IEEE Spectrum* broke out the digital measuring tools to probe the relative popularity of programming languages. Yet one thing remains constant: the dominance of Python.

Since it's impossible for even the most aggressive spy agency in the world to find out what language every single programmer uses when they sit down at their keyboards —especially the ones tapping away on [retro computers](#) or

Rank	Language	Type	Score
1	Python ▾	🌐 🗨️ ⚙️	100.0
2	Java ▾	🌐 📱 🗨️	95.3
3	C ▾	📱 🗨️ ⚙️	94.6
4	C++ ▾	📱 🗨️ ⚙️	87.0
5	JavaScript ▾	🌐	79.5
6	R ▾	🗨️	78.6
7	Arduino ▾	⚙️	73.2
8	Go ▾	🌐 🗨️	73.1
9	Swift ▾	📱 🗨️	70.5
10	Matlab ▾	🗨️	68.4

1. COVID19 Dataset

Explore


2. Python Programming

Active

**3. Google Colaboratory as
the Programming
Platform**

Reliable

Asynchronous

 racingbarchart.ipynb ☆
 File Edit View Insert Runtime Tools Help [Last edited on August 6](#)

 Comment Share Settings User

+ Code + Text Connect Editing

```

1 import pandas as pd
2 import matplotlib.pyplot as plt
3 import matplotlib.ticker as ticker
4 import matplotlib.animation as animation
5 import datetime
6 from IPython.display import HTML

[ ] 1 df = pd.read_csv('https://data.humdata.org/hxlproxy/api/data-preview.csv?url=https%3A%2F%2Fraw.githubusercontent.com%2FCSSEGISandData%2FCOVID-19%2Fdata%2Fmain%2Fcsse%2Ftime_series_covid19_confirmed_global.csv')
2
3
4 a = list(df.columns.values)
5 dates = a[-30:]
6
7 count = 0
8 dff = (df.sort_values(by=dates[count], ascending=False)
9       .head(10))
10 dff
11

```

	Province/State	Country/Region	Lat	Long	1/22/20	1/23/20	1/24/20	1/25/20	1/26/20	1/27/20	1/28/20	1/29/20	1/30/20	1/31/20	2/1/20
225	NaN	US	40.000000	-100.000000	1	1	2	2	5	5	5	5	5	7	
28	NaN	Brazil	-14.235000	-51.925300	0	0	0	0	0	0	0	0	0	0	0
131	NaN	India	20.593684	78.962880	0	0	0	0	0	0	0	0	1	1	
187	NaN	Russia	61.524010	105.318756	0	0	0	0	0	0	0	0	0	2	
181	NaN	Peru	-9.190000	-75.015200	0	0	0	0	0	0	0	0	0	0	
48	NaN	Chile	-35.675100	-71.543000	0	0	0	0	0	0	0	0	0	0	
223	NaN	United Kingdom	55.378100	-3.436000	0	0	0	0	0	0	0	0	0	2	
158	NaN	Mexico	23.634500	-102.552800	0	0	0	0	0	0	0	0	0	0	
201	NaN	Spain	40.463667	-3.749220	0	0	0	0	0	0	0	0	0	0	
133	NaN	Iran	32.427908	53.688046	0	0	0	0	0	0	0	0	0	0	

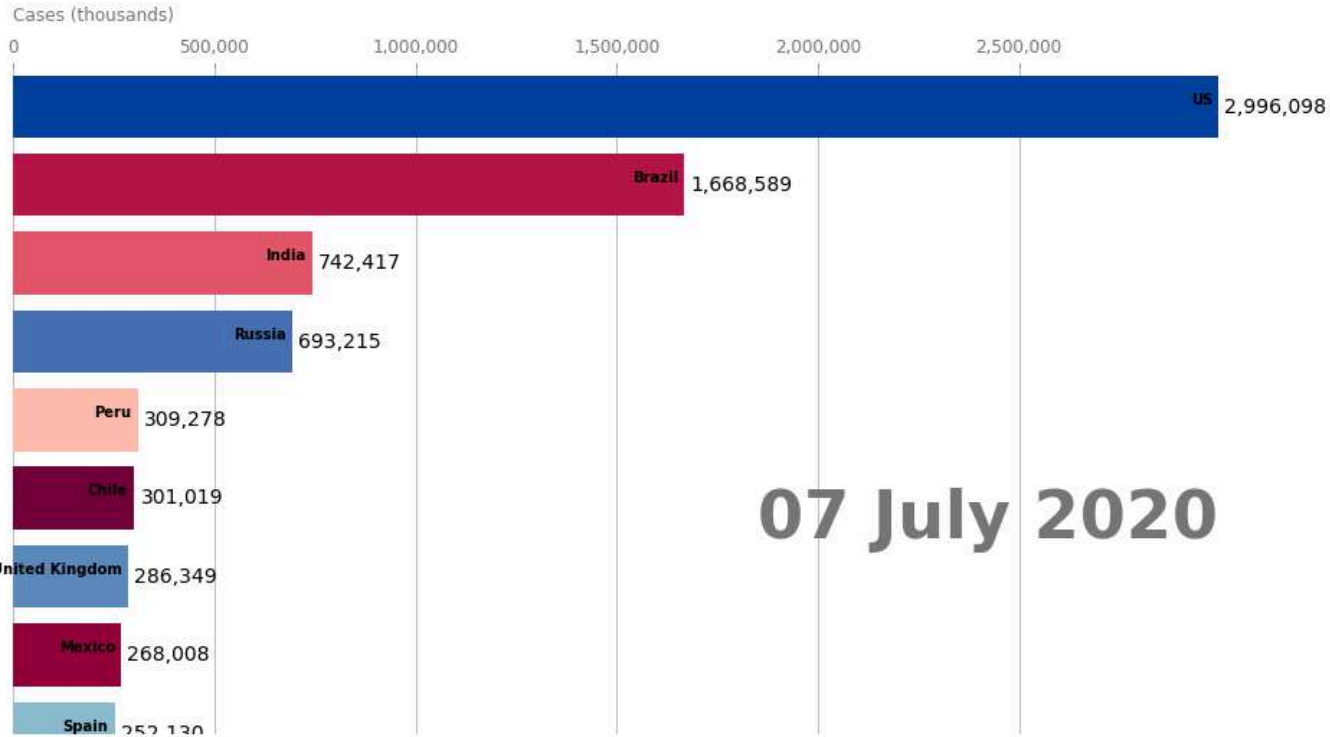
10 rows x 201 columns

Code / Compile / Collaborate



Once
 Loop
 Reflect

Coronavirus (COVID-19) cases recorded for the last 30 days



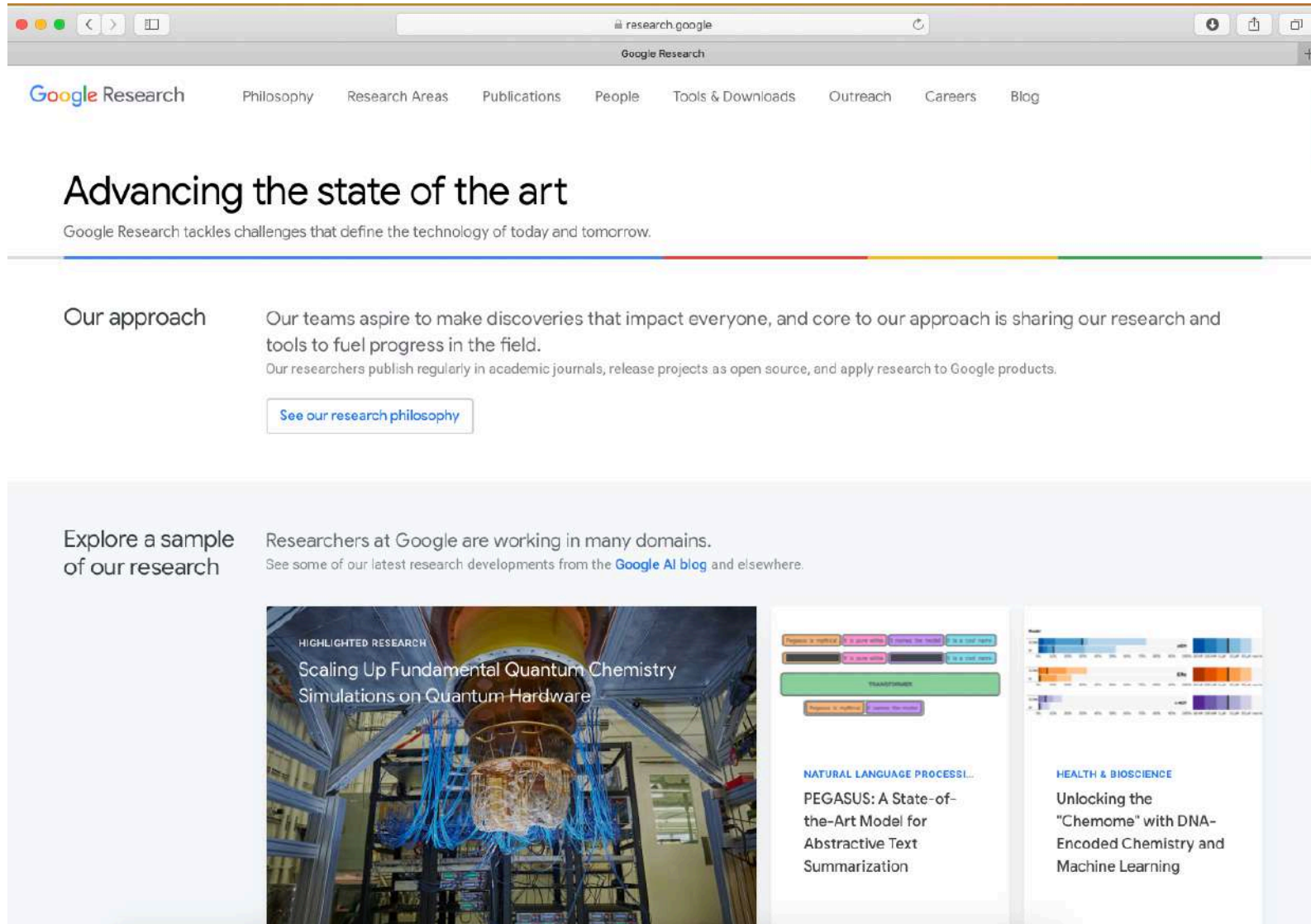
07 July 2020

Realtime Output

```

[ ] 1
    2 # Set up formatting for the movie files
    3 writer = animation.writers['ffmpeg']
    4 writer = Writer(fps=15, metadata=dict(artist='farhan'), bitrate=1800)
    5
    6 animator.save('lines.mp4', writer=writer)
    7
    
```

10 -



Community

1. COVID19 Dataset

Explore

2. Python Programming

Active

3. Google Colaboratory as
the Programming
Platform

Reliable

4. YouTube

Asynchronous

Personal Library

Activity Feed

Folders

Personal Library

4 Videos

New Folder

Folders

New Public Folder

How To Use Loom

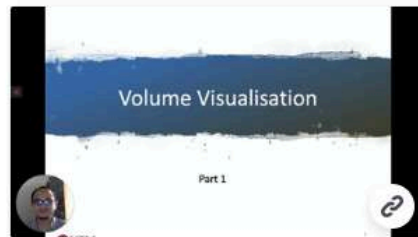
All Videos



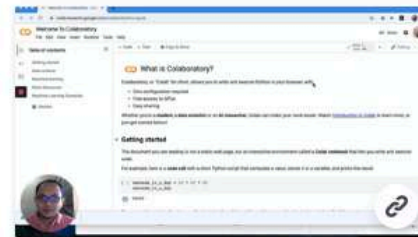
16 June, 2020 - Loom Recording
22:14 • 0 views • 3 months ago



Data Visualisation - Interpolation
9:00 • 41 views • 4 months ago



Introduction to Volume Visualisation
20:33 • 53 views • 4 months ago



COVID19 basic visualisation using
Google Colab and Python
37:00 • 77 views • 4 months ago

Creation Process

YouTube MY Search

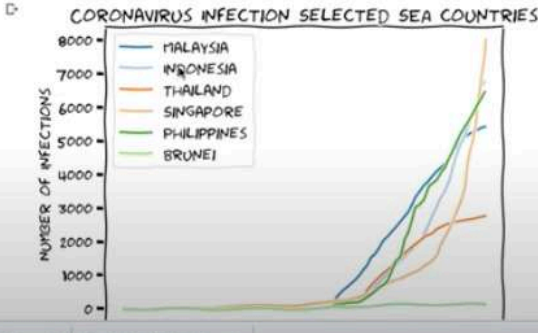
Chrome File Edit View History Bookmarks People Tab Window Help

colab.research.google.com/drive/1Mmic-j2BRurL... covid19matplotlibbasic.ipynb

```
[16] plt.ylabel('Number of Infections')
      plt.xlabel('Number of Days')

      plt.savefig('plot.png')

      plt.show()
```



CORONAVIRUS INFECTION SELECTED SEA COUNTRIES

Legend: MALAYSIA, INDONESIA, THAILAND, SINGAPORE, PHILIPPINES, BRUNEI

76.87 GB available

COVID-19
Get the latest information from the WHO about coronavirus. [LEARN MORE](#)

See more resources on Google

MALAYSIA
Python and Google Colab visualisation basics (with COVID19 csv data)

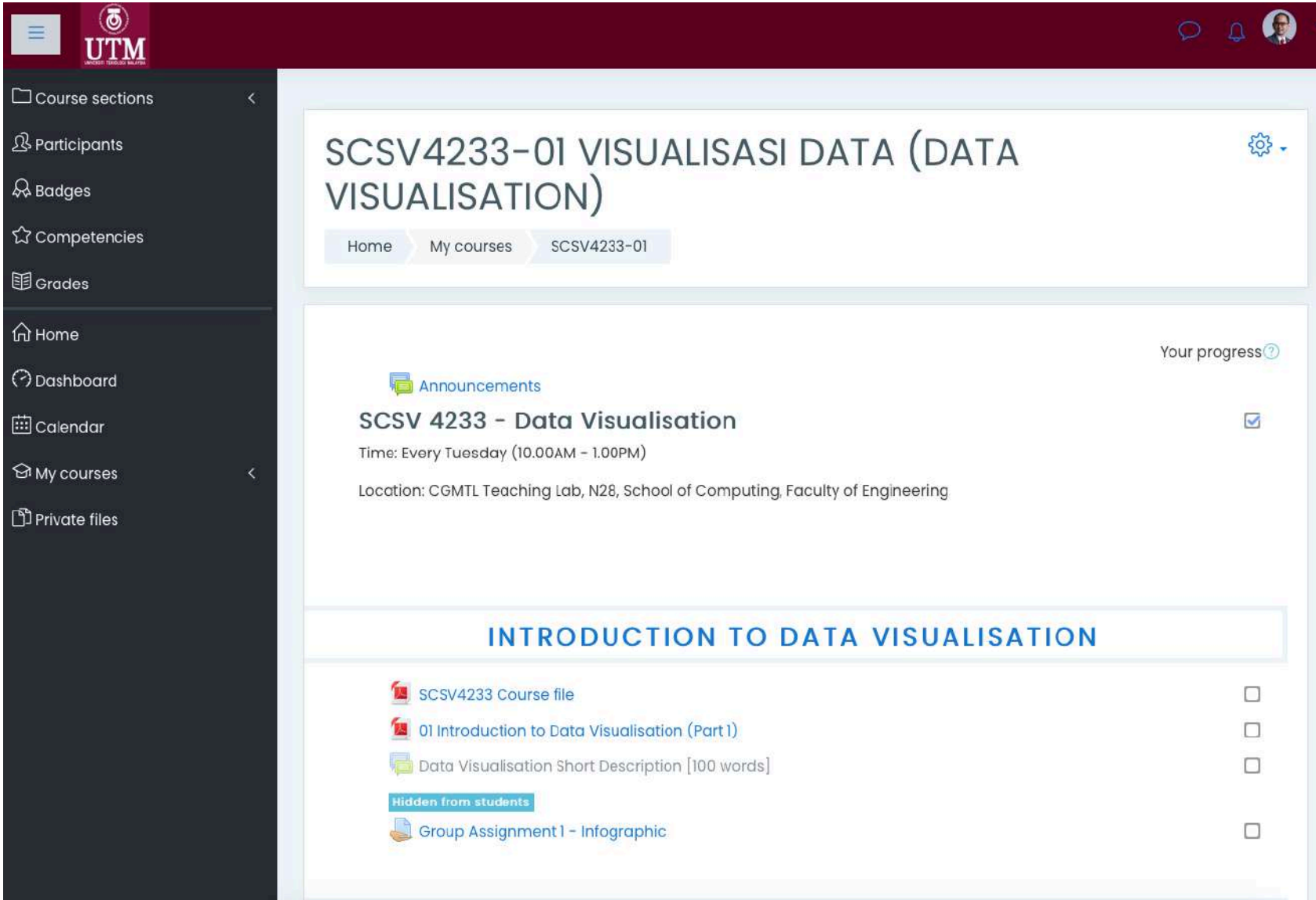
382 views • Apr 21, 2020

15 likes, 1 comment, SHARE, SAVE

Farhan Mohamed
25 subscribers

[ANALYTICS](#) [EDIT VIDEO](#)

Sharing

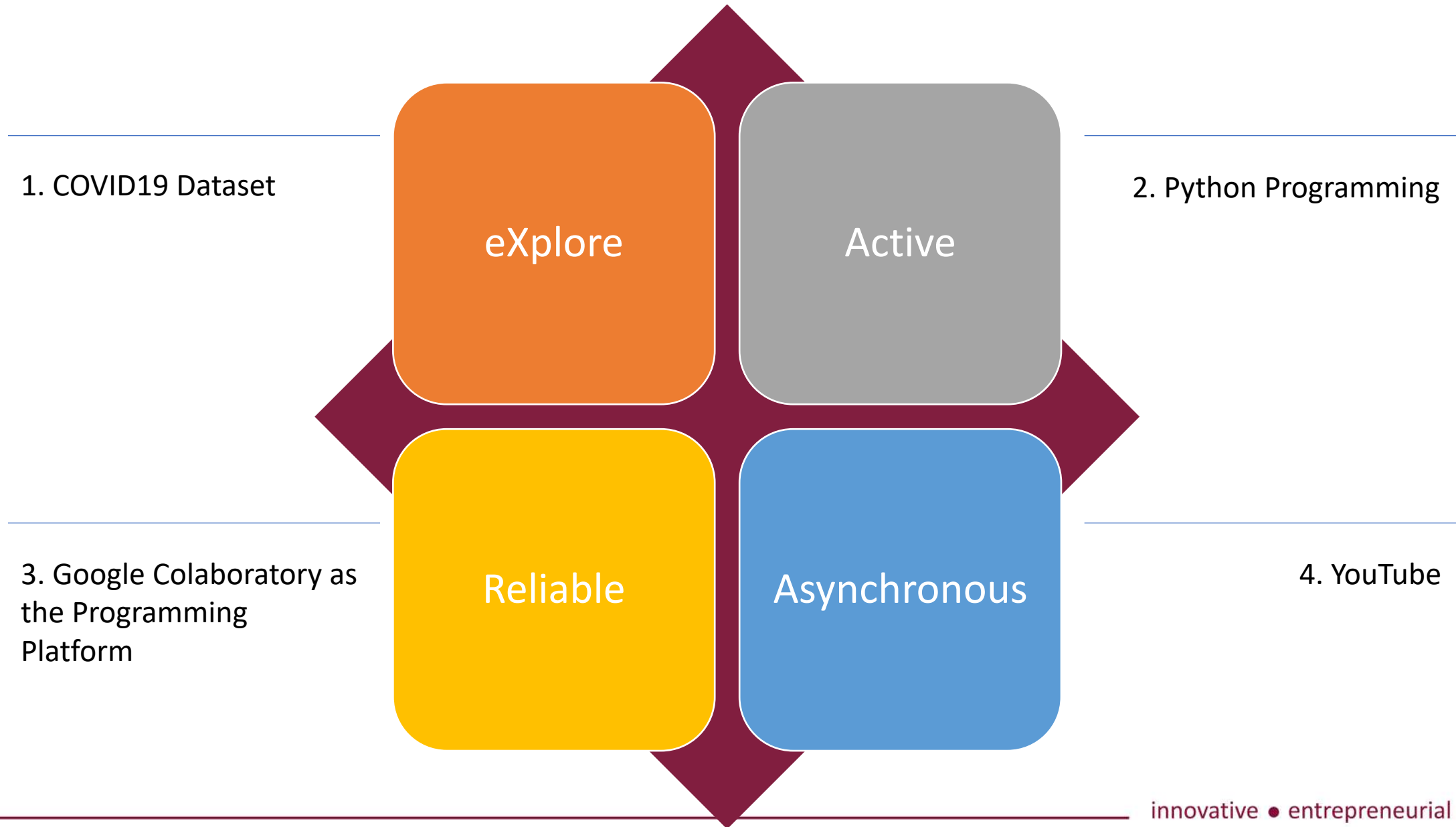


The screenshot shows a user interface for a Learning Management System (LMS). On the left is a dark sidebar with navigation options: Course sections, Participants, Badges, Competencies, Grades, Home, Dashboard, Calendar, My courses, and Private files. The main content area is titled 'SCSV4233-01 VISUALISASI DATA (DATA VISUALISATION)'. Below the title is a breadcrumb trail: Home > My courses > SCSV4233-01. A 'Your progress?' link is visible. Under the heading 'Announcements', there is a section for 'SCSV 4233 - Data Visualisation' with a checkmark icon. The announcement details are: 'Time: Every Tuesday (10.00AM - 1.00PM)' and 'Location: CGMTL Teaching Lab, N28, School of Computing, Faculty of Engineering'. Below this is a section titled 'INTRODUCTION TO DATA VISUALISATION' containing a list of items with checkboxes:

- SCSV4233 Course file
- 01 Introduction to Data Visualisation (Part 1)
- Data Visualisation Short Description [100 words]
- Hidden from students**
- Group Assignment 1 - Infographic

The LMS Platform

The XARA Approach (eXplore, Active, Reliable, Asynchronous)



My four ingredients in teaching and learning programming throughout the “lockdown”

C. Conclusion

Conclusion

There is **no instant silver bullet** or one-solution-for-all in moving from face-to-face lectures to online learning in the **“new norm”** teaching and learning. My recipe (solution) **emphasises** on the **technologies that are available** and **accessible to everyone.**



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Thank You

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