# Constructing HKU COVID-19 DIGITAL ARCHIVES

Harnessing AI for Building Comprehensive Research Collection

# Agenda

Project outline

Website walkthrough

What we have done

Coping with the AI challenge

Q & A



## Forward

- This project aims to collect, preserve and provide access to <u>the digitally</u> <u>born</u> records relating to the COVID-19 created by The University of Hong Kong. A designated <u>Digital Archives</u> that serves as a centralised repository of all HKU produced digital materials including electronic scholarly articles, publications, research data and media presentations in audio-visual formats. Other records of major HKU-sponsored activities such as the LYH Community Vaccination Centre and the LoveULoveHK initiative will also be included.
- This project will try to cover all outputs from all departments, faculties and administrative units as extensive as possible. The final digital platform will serve as <u>public access point</u> and will be searchable and be accessible by local and international communities within the allowance of copyright and privacy ordinance.

# KE Funded Project

- In Feb 2020. The FightCovid19 (<u>https://fightcovid19.hku.hk/</u>) web site was launched to highlight the work on COVID19 across HKU faculties and departments. The site consists of mostly contents aggregated from across the university, with some original content (such as the series of live video interviews with HKU experts.) The site was put on hiatus in 2020, when COVID19 took a break.
- As the 2.0 version of the 2020 FightCovid19 site, the proposed project will be much enhanced with stronger search capacity, automatic aggregation. The site will also be sustainable and continuously updated until COVID becomes endemic.

## **Design philosophy**

- Promote /show off HKU contributions during pandemic
- Record + Story + Archive
- For researchers and also general public





## HKU COVID-19 Digital Archives (https://covid19.lib.hku.hk)

- To collect, preserve and provide access to the digitally born records relating to the COVID-19 created by The University of Hong Kong.
- Act as a centralised repository of all HKU produced digital materials

   including electronic scholarly articles, publications, research data and media presentations in audio-visual formats.









## Website Walkthrough



Overview

## Discover HKU COVID-19 Digital Archives





# Challenges

Time constraint (Mid Dec 2022 – June 2023)

Limited manpower

Heterogenous data type

Diverse data sources

Copyright and license

Web pages have been taken down





## **Content management system**



- Slow and lagging if it hosts too much data
- May not be able to customize the style or function setting





# How do we collect the data?



## **Data Collection from Web Scraping**

# **Wise**News

#### News:

Major source: WiseNews to get the title, text content, date, publisher; GovNews to get gov policy related news Supplementary: Google search engine to get the News source link Challenge: Cannot send too many requests to google, IP address will be blocked

#### **HKU organised event:**

Major source: HKU press release, HKU UVision, HKU E-notice Supplementary: email to Faculty to gather the remaining events









## **Data Collection from Web Scraping**



Websites

Web Scraping

Data

- Python libraries like Requests-HTML, Beautiful Soup & Selenium to effectively extract HTML code from websites and parse it into Python objects.
- For no-code option, you can use Chrome Extension e.g. Data Miner, Web Scraper



## Data Collection from APIs

 Obtain title, description, tag, thumbnail, transcript for HKU related COVID-19 YouTube video





## Metadata

- Simple metadata structure apply to all data types
- Post ID, Title, Description, Full text, Subject, Organisation, Category, Date, Wave of Covid, Contributor, HKU people name, Non-HKU people name, Resources type, Link 404, Wayback link

2055         Social and         CMU Phase and         Cdu Veina, A staticalizationa         Event         2020-06-00         Intra-relative contract         Intra-relative contract         Protein	ID 🔄 Title	~	Description ~	Full text 🗠	Subject -	Organisation	Category	- Date	Wave of Covid	- Source URL - Link 404	- HKU People -	RPID -	Non-HKU People	News Author 🗠 Type	Publisher	🕆 wayback_link 🗠
20556         Numerican         Cdv         Verbans         And Sobalization         Event         2020-06-10         Integrituphed bits         Thompson         p00233.th         Adds Adguello         Porter         Https://byb.bits/kits           20557         Resinging The ex- ansation         Cdv         Derive from ULAS Shing Faculty         Event         2020-06-32         Https://bits/kits/s         Targ James Take         p002355; David L-2 Jong Kan-         Event         Https://bits/kits/s           20551         Targ James Take         p00235; Diver JAL Shing         Event         2020-06-32         Https://bits/kits/s         Event         Https://bits/kits/s           20551         Targ James Take         p002355; Diver JAL Shing         Event         2020-07-33         3d Third vave         Integrituphed Bits/s         Cooderin ALIn, From p002357; Diver JAL Shing         Porter         Https://byb.Bits/s           20551         Summer         Cdv         Online forum         Faculty of Social         Event         2020-07-13         3d Third vave         Integrituphed Bits/s         Clashopfin_La         p002357; Diver JAL         Porter         Https://byb.Bits/s           20584         Summer         Cdv         Online forum         Faculty of Social         Event         2020-07-23         3d Third vave         Integrituphed Bits/s<	20555 Social a	and	COVID-19 has an	<div .<="" td=""><td>Webinar,</td><td>Faculty of Social</td><td>Event</td><td>2020-06-08</td><td></td><td>https://fightcovid19.hk</td><td>Jordan Lucy</td><td>rp01707,rp0</td><td>Arisman, Ruttiya Bhula-</td><td>Poster</td><td></td><td>https://pywb.lib.hku.hk</td></div>	Webinar,	Faculty of Social	Event	2020-06-08		https://fightcovid19.hk	Jordan Lucy	rp01707,rp0	Arisman, Ruttiya Bhula-	Poster		https://pywb.lib.hku.hk
2055         Re-magning         Tie +         Cdv         Denie from         USA: Sing Faculty: Event         2020-08-20         Impailing/indexed/1bit         Tang James Tuak         p00555;         Denie run         USA: Sing Faculty: Event         Denie from         USA: Sing Faculty: Event         Denie from         USA: Sing Faculty: Event         Denie from         Mass of the sing Faculty: Event </td <td>20556 AGI x AC</td> <td>GF</td> <td>In this webinar,</td> <td><div< td=""><td>Webinar,</td><td>Asia Global Institute</td><td>Event</td><td>2020-06-10</td><td></td><td>https://fightcovid19.hk</td><td>Thompson</td><td>rp01293,nh</td><td>Adolfo Arguello</td><td>Poster</td><td></td><td>https://pywb.lib.hku.hk</td></div<></td>	20556 AGI x AC	GF	In this webinar,	<div< td=""><td>Webinar,</td><td>Asia Global Institute</td><td>Event</td><td>2020-06-10</td><td></td><td>https://fightcovid19.hk</td><td>Thompson</td><td>rp01293,nh</td><td>Adolfo Arguello</td><td>Poster</td><td></td><td>https://pywb.lib.hku.hk</td></div<>	Webinar,	Asia Global Institute	Event	2020-06-10		https://fightcovid19.hk	Thompson	rp01293,nh	Adolfo Arguello	Poster		https://pywb.lib.hku.hk
2058         Could-19         Although the (add)         Colline form, Lik Shing Faculty, Event         2020-08-30         Impailingbood/13 hit         Yean Kook         mp03086.pp         Dual the Dual to	20557 Re-imag	gining	The e-	Kdiv	E-symposium,	Technology-	Event	2020-06-22		https://fightcovid19.hk	Tang James Tuck	rp00595,rp	Chetwyn Chan,Roger	Event		https://pywb.lib.hku.hk
20255         The Paradign         Point Paradign <td>20558 Covid-19</td> <td>19</td> <td>Although the</td> <td><div .<="" td=""><td>Online forum</td><td>Li Ka Shing Faculty</td><td>Event</td><td>2020-06-30</td><td></td><td>https://fightcovid19.hk</td><td>Yuen Kwok</td><td>rp00366,rp</td><td>David Ho,Zhong Nan-</td><td>Poster</td><td></td><td>https://pywb.lib.hku.hk</td></div></td>	20558 Covid-19	19	Although the	<div .<="" td=""><td>Online forum</td><td>Li Ka Shing Faculty</td><td>Event</td><td>2020-06-30</td><td></td><td>https://fightcovid19.hk</td><td>Yuen Kwok</td><td>rp00366,rp</td><td>David Ho,Zhong Nan-</td><td>Poster</td><td></td><td>https://pywb.lib.hku.hk</td></div>	Online forum	Li Ka Shing Faculty	Event	2020-06-30		https://fightcovid19.hk	Yuen Kwok	rp00366,rp	David Ho,Zhong Nan-	Poster		https://pywb.lib.hku.hk
20580         Cold-19 has         Cdu         Dhine forum, Pais Global Institute         Event         2020-07-06         Intro All placeodED.bit         Spence         ph00005 n         Poster         Ptps:///lipho.bit.bits           20561         Summe         Vhati you         Cdu         Ohine forum, Paculy of Calasian         Event         2020-07-06         Hotps://liphoodED.bits         Coldwin All.Fing mp02385.rh.         Poster         Ptps://liphobl.bit.bits           20561         Summe         Vhati you         Cdu         Ohine forum, Pick UB uniness         Event         2020-07-03         3d Thad vave         Intro All wave         Difta Summe         Poster         Ptps://liphobl.bit.bits         Calabor of Calabor         Poster         Ptps://liphobl.bit.bits         Calabor         POSter         Ptps://liphobl.bit.bits         Poster         Ptps://liphobl.bits         Poster         Ptps://liphobl.bit.bits         Poster         Ptps://liphobl.bits         Poster         Ptps://liphobl.bits         Poster         Ptps://liphobl.bits         Poster         Ptps://liphobl.bits         Poster <td>20559 The Par</td> <td>radigm</td> <td>Prof James Tang,</td> <td><div .<="" td=""><td>Speech,</td><td>Technology-</td><td>Event</td><td>2020-06-22</td><td></td><td>https://fightcovid19.hk</td><td>Tang James Tuck</td><td>rp00595</td><td></td><td>Event</td><td></td><td>https://pywb.lib.hku.hk</td></div></td>	20559 The Par	radigm	Prof James Tang,	<div .<="" td=""><td>Speech,</td><td>Technology-</td><td>Event</td><td>2020-06-22</td><td></td><td>https://fightcovid19.hk</td><td>Tang James Tuck</td><td>rp00595</td><td></td><td>Event</td><td></td><td>https://pywb.lib.hku.hk</td></div>	Speech,	Technology-	Event	2020-06-22		https://fightcovid19.hk	Tang James Tuck	rp00595		Event		https://pywb.lib.hku.hk
2058 [Summer     Forestor A. Lin     Giv     Online form,     Faculty of Education     Event     2020-07-10     3 di Third vave     Intra Effigueto di Third     Char Yu Harger     Poster     Intra Effigueto di Third       2058 [Summer     Today, the     Giv     Online form,     Rouly of Suiteres     Event     2020-07-10     3 di Third vave     Intra Effigueto di Third     Poster     Intra Effigueto di Third       2056 [Summer     Today, the     Giv     Online form,     Rouly of Suiteres     Event     2020-07-17     3 di Third vave     Intra Effigueto di Third     Poster     Intra Effigueto di Third       2056 [Summer     Intra Education     Intra Education     Event     2020-07-24     3 di Third vave     Intra Education     Poster     Intra Education     Poster     Intra Education       2056 [Summer     Intra Education     Event     2020-07-24     3 di Third vave     Intra Education     Poster     Intra Education     Poster     Intra Education       2056 [Summer     Intra Education     Event     2020-07-21     3 di Third vave     Intra Education     Poster     Intra Education     Poste	20560 Global		Covid-19 has	<div .<="" td=""><td>Online forum,</td><td>Asia Global Institute</td><td>Event</td><td>2020-07-08</td><td></td><td>https://fightcovid19.hk</td><td>Spence</td><td>nh00005,n</td><td></td><td>Poster</td><td></td><td>https://pywb.lib.hku.hk</td></div>	Online forum,	Asia Global Institute	Event	2020-07-08		https://fightcovid19.hk	Spence	nh00005,n		Poster		https://pywb.lib.hku.hk
2058 [Summer         Mait isyout         (dw         Online forum, Faculy of Event         2020-07-13         3d Third vave         Inter (Lingbaced)B.bk         Call Ange/Lingbaced)B.bk         Description         Poster         Imper/Lingbaced)B.bk           2058 [Summer         Today and the set of the set o	20561 [Summ	ner	Professor A. Lin	<div< td=""><td>Online forum,</td><td>Faculty of Education</td><td>n Event</td><td>2020-07-06</td><td></td><td>https://fightcovid19.hk</td><td>Goodwin A Lin, Fung</td><td>rp02334,nh</td><td></td><td>Poster</td><td></td><td>https://pywb.lib.hku.hk</td></div<>	Online forum,	Faculty of Education	n Event	2020-07-06		https://fightcovid19.hk	Goodwin A Lin, Fung	rp02334,nh		Poster		https://pywb.lib.hku.hk
2058 [Summer         Today, the         Cdv         Online forum, HKUB surveys         Event         2020-71-3         3 rd Third wave         Inter (Implexcuid) Bik         Call-hongbin, La         rp02287, rA         Poster         Https:///publib.lhku           20564 [Summer         Mary Surveys         Asia Global Institute         Event         2020-07-72         3 rd Third wave         Inter (Implexcuid) Bikk         Mary Surveys         Poster         Https:///publib.lhku           20565 [Summer         Inter (Implexcuid) Bikk         Velocity         Poster         Https:///publib.lhku         Velocity         Poster         Https:///publib.lhku           20565 [Summer         Inter (Implexcuid) Bikk         Velocity         Event         2020-07-27         3 rd Third wave         Inter (Implexcuid) Bikk         Velocity (Implexcuid) Bikk         Poster         Https:///publib.lhku           20565 [Summer         Poster         Inter (Implexcuid) Bikk         Element (Implexcuid) Bikk </td <td>20562 [Summ</td> <td>ner</td> <td>What is your</td> <td><div< td=""><td>Online forum,</td><td>Faculty of</td><td>Event</td><td>2020-07-10</td><td>3rd Third wave</td><td>https://fightcovid19.hk</td><td>Chao Yu Hang</td><td>rp02396,nh</td><td></td><td>Poster</td><td></td><td>https://pywb.lib.hku.hk</td></div<></td>	20562 [Summ	ner	What is your	<div< td=""><td>Online forum,</td><td>Faculty of</td><td>Event</td><td>2020-07-10</td><td>3rd Third wave</td><td>https://fightcovid19.hk</td><td>Chao Yu Hang</td><td>rp02396,nh</td><td></td><td>Poster</td><td></td><td>https://pywb.lib.hku.hk</td></div<>	Online forum,	Faculty of	Event	2020-07-10	3rd Third wave	https://fightcovid19.hk	Chao Yu Hang	rp02396,nh		Poster		https://pywb.lib.hku.hk
20564         [Summer]         Mary students         Glub         Control         Faculty of Social         Event         2020-07-72         Staf Third vave         https://hipbood/33.bk         Approx/hipbood/33.bk	20563 [Summ	ner	Today, the	<div .<="" td=""><td>Online forum,</td><td>HKU Business</td><td>Event</td><td>2020-07-13</td><td>3rd Third wave</td><td>https://fightcovid19.hk</td><td>Cai Hongbin,Lai</td><td>rp02267,nh</td><td></td><td>Poster</td><td></td><td>https://pywb.lib.hku.hk</td></div>	Online forum,	HKU Business	Event	2020-07-13	3rd Third wave	https://fightcovid19.hk	Cai Hongbin,Lai	rp02267,nh		Poster		https://pywb.lib.hku.hk
20556 AGIs AGIs AGIs AGIs Agart from certain (dv       Webinar, Araß Global Institute Event       2020-07-22       3/d Third vave       https://tps/tbl.bh.ku       Porter       https://tps/tbl.bh.ku         20556 I Summer       Are health       (dv       Online forum, Existy of Event       2020-07-27       3/d Third vave       https://tps/tbl.bh.ku       Event       2020-07-07       3/d Third vave       https://tps/tbl.bh.ku       Event       2020-07-07       3/d Third vave       https://tps/tbl.bh.ku       Event       Potter       https://tps/tbl.bh.ku         20570 AGIs AFE       The vorkhop isa       (dv       Webrand, maximus       Forum       2020-03-31       2/d Second vave       https://tps/tbl.bh.ku       Potter       https://tps/tbl.bh.ku       2057/d AGIs AFE       Forum       2020-03-31       2/d Second vave       https://tps/tbl.bh.ku       Potter       https://tps/tbl.bh.ku       2057/d AGIs AFE       Forum       2020-03-31       2/d Second vave       https://tps/tbl.bh	20564 [Summ	ner	Many students	<div< td=""><td>Online forum,</td><td>Faculty of Social</td><td>Event</td><td>2020-07-17</td><td>3rd Third wave</td><td>https://fightcovid19.hk</td><td>Hayward William</td><td>rp00630,nh</td><td></td><td>Poster</td><td></td><td>https://pywb.lib.hku.hk</td></div<>	Online forum,	Faculty of Social	Event	2020-07-17	3rd Third wave	https://fightcovid19.hk	Hayward William	rp00630,nh		Poster		https://pywb.lib.hku.hk
2056 [ Summer In this leadership (diu Online forum, Faculty of Event 2020-07-24 3 dThird wave https://jpybl.bi.html 20567 [ Summer Are head - diu Online forum, Faculty of Education Event 2020-07-23 3dThird wave https://jpybl.bi.html 20568 [ Summer Legal proteins : 20568 [ Summer Legal proteins : 20568 [ Summer Legal proteins : 20578 [ Summer Legal proteins : 20578 [ Summer Legal proteins : 20578 [ Summer Legal proteins : 20589 [ Summer Legal proteins : 20589 [ Summer Legal proteins : 20578 [ Summer Lega	20565 AGI × AC	GF	Apart from certain	<div< td=""><td>Webinar,</td><td>Asia Global Institute</td><td>Event</td><td>2020-07-22</td><td>3rd Third wave</td><td>https://fightcovid19.hk</td><td>Amayaenvbo</td><td>nh00023,n</td><td></td><td>Poster</td><td></td><td>https://pywb.lib.hku.hk</td></div<>	Webinar,	Asia Global Institute	Event	2020-07-22	3rd Third wave	https://fightcovid19.hk	Amayaenvbo	nh00023,n		Poster		https://pywb.lib.hku.hk
2057 [Summer Arehealth (dw Ohlne forum, Lika Shing Faculty Event 2020-07-27 3rd Third vave https://lippkodd3.bk Lin Wuan Kvarg- rp.02526,h [Takeshi Kasai Poster https://lippkod.bk.ku 20568 [Summer Legal practice is 'dw Ohlne forum, Faculty of Law Event 2020-07-31 3rd Third vave https://lippkodd3.bk Flemmil fibmas inp.02526,h [Goddaw Kasai Poster https://lippkod.bk.ku 20563 [Summer Legal practice is 'dw Ohlne forum, Faculty of Law Event 2020-07-31 3rd Third vave https://lippkodd3.bk Flemmil fibmas inp.02526,h [Goddaw Kasai Poster https://lippkod.bk.ku 2057h Ark Fib South (dw Webina, Eak Asa Giba Institute Event 2020-07-31 3rd Third vave https://lippkodd3.bk Flemmil fibmas inp.02247,p Poster https://lippkod.bk.ku 2057h Ark Fib South (dw Webina, Eak Asa Giba Institute Event 2020-03-31 2nd Second vave https://lippkodd3.bk Flemmil fibe ave https://lippkodd5.bk.ku 2057h Ark Flemeil fibe ave https://lippkodd5.bk.ku 2057h Ark Flemeil fibe ave https://lippkodd5.bk.ku 2057h Ark Event 2020-03-31 2nd Second vave https://lippkodd5.bk.ku 2057h Ark Ku 2020-11 ave Lacebook Profile ave https://lippkodd5.bk.ku 2057h Ark Ku 2020-11 ave Lacebook Profile ave Profile ave Ark 2020-03-31 2nd Second vave https://lippkodd.bk.ku 2057h Ark Ku 2020-11 ave Lacebook Profile ave Profile	20566 [Summ	ner	In this leadership	<div< td=""><td>Online forum,</td><td>Faculty of</td><td>Event</td><td>2020-07-24</td><td>3rd Third wave</td><td>https://fightcovid13.hk</td><td>Webster Christopher</td><td>rp01747,nh</td><td></td><td>Poster</td><td></td><td>https://pywb.lib.hku.hk</td></div<>	Online forum,	Faculty of	Event	2020-07-24	3rd Third wave	https://fightcovid13.hk	Webster Christopher	rp01747,nh		Poster		https://pywb.lib.hku.hk
20568 [Summer       Professor       (dw       Online forum, Faculty of Education Event       2020-07-31       Sid Third wave       https://hip/thitdpictoud/13.hk       Filemain phones       pr01282.hh       Goldrey Ngai       Poster       https://pyb.hb.hku         20568 [Summer       Legistration is       (dw       Velonan, Beak       Asta Global Instruce       Event       2020-09-00       3id Third wave       https://hip/thitdpictoud/13.hk       Manualsynii       nh00240.n       Poster       https://pyb.hb.hku         20571 SPH-MSC       The south       (dw       Velonan, Beak       Asta Global Instruce       Event       2020-03-10       and Scood Wave       https://hip/thitdpictoud/13.hk       Manualsynii       nh00240.n       Poster       https://pyb.hb.hku         20573 [Struce Lagistration is       (dw       Velona King       Sudy. Mental HKU Centre for       Event       2021-07-30       3id Third wave       https://pyb.hb.hku       intps://pyb.hb.hku       poster       https://pyb.hb.hku       20573 (Struce Lagistration is       p02247.p       Event       https://pyb.hb.hku       20573 (Struce Lagistration is       p02247.p       Event       https://pyb.hb.hku       20573 (HkU Velonan       intps://pyb.hb.hku       p02247.p       Event       https://pyb.hb.hku       20573 (HkU Velonan       File House Lagistratin Hup.Lagistruse Lagistration Hup.Lagistruse Lagistratin	20567 [Summ	ner	Are health	<div< td=""><td>Online forum,</td><td>Li Ka Shing Faculty</td><td>Event</td><td>2020-07-27</td><td>3rd Third wave</td><td>https://fightcovid13.hk</td><td>Lin Vivian Kwang-</td><td>rp02528,nh</td><td>Takeshi Kasai</td><td>Poster</td><td></td><td>https://pywb.lib.hku.hk</td></div<>	Online forum,	Li Ka Shing Faculty	Event	2020-07-27	3rd Third wave	https://fightcovid13.hk	Lin Vivian Kwang-	rp02528,nh	Takeshi Kasai	Poster		https://pywb.lib.hku.hk
2055 (Summer Legal practice): (div Uchine forum, Faculty of Law Event 2020-08-06 3rd Third wave https://pywb.lb.hku 2057 a KLASF The South (div Uchina, Bek Alas Clobal Institute Event 2020-09-07 3rd Third wave https://pywb.lb.hku 2057 SPH-JMSC The vorkshop is (div Uchine forum, HKUC Centre for Event 2020-09-07 3rd Third wave https://pywb.lb.hku 2057 a Connect the The Hong Kong (div Study, Mental HKUC Centre for Event 2020-09-07 3rd Third wave https://pywb.lb.hku 2057 a Connect the The Hong Kong (div Study, Mental HKUC Centre for Event 2020-09-10 3rd Third wave https://pywb.lb.hku 2057 a Connect the The Hong Kong (div Study, Mental HKUC Centre for Event 2020-09-10 3rd Third wave https://pywb.lb.hku 2057 b HKU Uchine are many There are Webinar, Faculty of Law Event 2020-09-10 3rd Third wave https://pywb.lb.hku 2057 b HKU Uchine are many There are Webinar, Faculty of Law Event 2020-09-10 3rd Third wave https://pywb.lb.hku 2057 b HKU Uchine are many There are Webinar, Faculty of Law Event 2020-09-10 3rd Third wave https://pywb.lb.hku 2057 b HKU Webina Since the (div Webinar, Faculty of Law Event 2020-05-15 HKU Webina There are uching Faculty of Law Event 2020-05-15 HKU Webina Tang Eaculty of Law Event 2020-05-15 HKU Webina Tang Eaculty of Law Event 2020-05-16 HKU Webina Tang Eaculty of Law Event 2020-05-17 HKU Webina Tang Eaculty of Law Event 2020-05-18 HKU Metha Tang Brian W Indone/He Keite, Hku Event Https://pywb.lb.hku 20578 HKU Webina Tang Eaculty of Law Event 2020-05-19 Https://pwb.lb.hku 20579 Intellectual The University of Kdiv Webinar, Faculty of Law Event 2020-05-25 Sh Fifth wave https://www.law.hkubh Sun Hacchen rp01270 Mathaw Keite, Weter Https://pywb.lb.hku 20558 ICPL: The University of Kdiv Webinar, Faculty of Law Event 2022-05-25 Sh Fifth wave https://www.law.hku	20568 [Summ	ner	Professor	<div< td=""><td>Online forum,</td><td>Faculty of Education</td><td>n Event</td><td>2020-07-31</td><td>3rd Third wave</td><td>https://fightcovid19.hk</td><td>Flemmig Thomas</td><td>rp01926,nh</td><td>Godfrey Ngai</td><td>Poster</td><td></td><td>https://pywb.lib.hku.hk</td></div<>	Online forum,	Faculty of Education	n Event	2020-07-31	3rd Third wave	https://fightcovid19.hk	Flemmig Thomas	rp01926,nh	Godfrey Ngai	Poster		https://pywb.lib.hku.hk
2057 3 FL/HSC The South 〈dw Webinar, Faculty of Law Event 2020-09-07 37 flind vave https://publib.htu 2057 3 FL/HSC The vorkshop is a 〈dw Webinar, Faculty of Law Event 2020-09-10 3rd Flind vave https://publib.htu 2057 3 FL/HSC The vorkshop is a 〈dw Webinar, Faculty of Law Event 2020-09-10 3rd Flind vave https://publib.htu 2057 3 FL/CUVID Three are many Three are Webinar, LiKa Shing Faculty of Law Event 2020-09-10 3rd Flind vave https://publib.htu 2057 3 FL/CUVID Three are many Three are Webinar, LiKa Shing Faculty of Law Event 2020-09-10 3rd Flind vave https://publib.htu 2057 4 FL/CUVID Three are many Three are Webinar, LiKa Shing Faculty of Law Event 2020-09-10 3rd Flind vave https://publib.htu 2057 6 FL/CUVID Three are Mebinar, LiKa Shing Faculty of Law Event 2020-05-06 2nd Second wave https://publib.htu 2057 6 FL/CUVID Three are Mebinar, Faculty of Law Event 2020-05-06 2nd Second wave https://publib.htu 2057 6 FL/CUVID Three are Mebinar, Faculty of Law Event 2020-05-06 2nd Second wave https://publib.htu 2057 6 FL/CUVID Three are Mebinar, Faculty of Law Event 2020-05-06 2nd Second wave https://publib.htu 2057 6 FL/CUVID Three are Mebinar, Faculty of Law Event 2020-05-06 2nd Second wave https://publib.htu 2057 8 HL/U Webina Sin Second Vave Event 2020-05-05 Mebinar, Faculty of Law Event 2020-05-24 Sth Fifth vave https://publib.htu 20579 Intelleval Taw University of Kdv Webinar, Faculty of Law Event 2020-05-24 Sth Fifth vave https://publib.htu 20580 CCPL: The University of Kdv Webinar, Faculty of Law Event 2020-05-25 Sth Fifth vave https://publib.htu 20580 CCPL: The University of Kdv Webinar, Faculty of Law Event 2020-05-25 Sth Fifth vave https://p	20569 [Summ	ner	Legal practice is	<div< td=""><td>Online forum,</td><td>Faculty of Law</td><td>Event</td><td>2020-08-06</td><td>3rd Third wave</td><td>https://fightcovid13.hk</td><td>Fu Hualing,Chan</td><td>rp01245,nh</td><td></td><td>Poster</td><td></td><td>https://pywb.lib.hku.hk</td></div<>	Online forum,	Faculty of Law	Event	2020-08-06	3rd Third wave	https://fightcovid13.hk	Fu Hualing,Chan	rp01245,nh		Poster		https://pywb.lib.hku.hk
20571 SPH-JMSC       The workshop is a Gluw       Workshop, School of Publie       Event       2020-03-31       2nd Second wave       https://lipuwi.lip.htuc       rp20528(7,p)       Event       https://lipuwi.lip.htuc         20572       "Openet Mit is a Shing Faculty       Event       2020-03-31       2nd Second wave       https://lipuwi.lip.htuc       rp20538.nh       Poster       https://lipuwi.lip.htuc         20573       "Openet Mit is a Shing Faculty       Event       2020-03-10       3rd Third wave       https://lipuwi.lip.htuc       rp20538.nh       Event       https://lipuwi.lip.htuc         20573       "Connect the       The reare Webinar,       Faculty of Law       Event       2020-05-06       2nd Second wave       https://lipuwi.lip.htuc       Trag Brian W       nh00044       Event       https://lipuwi.lip.htuc         20575       HKU Webinar,       Faculty of Law       Event       2020-05-15       https://lipuwi.lip.htuc       Sarah Hinchliffe       Event       https://lipuwi.lip.htuc         20577       The seminar will       rdw       Webinar,       Faculty of Law       Event       https://lipuwi.lip.htuc       Sarah Hinchliffe       Event       https://lipuwi.lip.htuc         20578       Hewinar, Machavi Sunder, Law, Faculty of Law       Event       2021-03-17       dth Forth wave       https://li	20570 AGI x AC	GF	The South	<div< td=""><td>Webinar, Belt</td><td>Asia Global Institute</td><td>Event</td><td>2020-09-07</td><td>3rd Third wave</td><td>https://fightcovid13.hk</td><td>Mamulashvili</td><td>nh00040,n</td><td></td><td>Poster</td><td></td><td>https://pywb.lib.hku.hk</td></div<>	Webinar, Belt	Asia Global Institute	Event	2020-09-07	3rd Third wave	https://fightcovid13.hk	Mamulashvili	nh00040,n		Poster		https://pywb.lib.hku.hk
2057 2 予学用会算 (14km / Lacebook, Yiele (14km / Yiele (14km / Lacebook, Yiele (14km / Yiele (14km / Lacebook, Yiele (14km /	20571 SPH-JM	MSC	The workshop is a	<div< td=""><td>Workshop,</td><td>School of Public</td><td>Event</td><td>2020-03-31</td><td>2nd Second wave</td><td>https://fighteovid19.hk</td><td>Fukuda</td><td>rpU2247,rp</td><td></td><td>Event</td><td></td><td>https://pywb.lib.hku.hk</td></div<>	Workshop,	School of Public	Event	2020-03-31	2nd Second wave	https://fighteovid19.hk	Fukuda	rpU2247,rp		Event		https://pywb.lib.hku.hk
20573 "Connect Me The Hong Kong       Cid       Study, Mental HK/LC Entre for       Event       2021-07-10       https://www.law.hku.ht       There are many       Event       Mttps://pwb.lib.htu         20574 HK/U COVID-       There are many       Cid       Webinar,       Faculty of Law       Event       2021-07-20       Mttps://www.law.hku.ht       Tang Brian M       nh00044       Event       Mttps://pwb.lib.htu         20575 HK/U Vebinar       Since the       Kdw       Webinar,       Faculty of Law       Event       2020-05-06       2nd Second wave       https://www.law.hku.h       Mtdps://www.law.hku.h       Mtdps://ww	20572 青少年度	■殺與	生命熟練有幸邀請	青少年自殺與	Online forum,	HKJC Centre for	Event	2021-03-19	4th Forth wave	https://www.facebook.	Yip Paul Siu	rp00596,nh		Poster		https://pywb.lib.hku.hk
20574       HKU CUCVID       There are many intere are many interementary interemen	20573 "Conner	ot the	The Hong Kong	<div< td=""><td>Study, Mental</td><td>HKJC Centre for</td><td>Event</td><td>2020-09-10</td><td>3rd Third wave</td><td>https://www.hku.hk/pr</td><td></td><td></td><td></td><td>Event</td><td></td><td>https://pywb.lib.hku.hk</td></div<>	Study, Mental	HKJC Centre for	Event	2020-09-10	3rd Third wave	https://www.hku.hk/pr				Event		https://pywb.lib.hku.hk
20576       HKU       The presentation       (div       Webinar,       Faculty of Law       Event       202105-05       2nd Second wave       https://twww.law.hku.h       Iang Brian W       nhttps://tww.law.hku.h       Event       https://twww.law.hku.h         20576       HKU Webinar,       Faculty of Law       Event       2020-05-15       https://twww.law.hku.h       Sarah Hinchliffe       Event       https://tww.law.hku.h         20577       Tax       This seminar will       (div       Webinar, Tax       Faculty of Law       Event       2020-12-09       4th Forth wave       https://tww.law.hku.h       Sarah Hinchliffe       Event       https://tww.law.hku.h         20577       Tax       The University of (div       Webinar, Law, Faculty of Law       Event       2021-12-03       4th Forth wave       https://tww.law.hku.h       Sarah Hinchliffe       Event       https://tww.law.hku.h         20578       (Mebinar, Law, Law, Law, Law, Law, Law, Law, Law	20574 HKU CO	JVID-	There are many	There are	Webinar,	Li Ka Shing Faculty	Event	2021-07-20		https://covid19.hku.hk IBUE	Fukuda Keiji,Hung	rp02247,rp		Event		https://pywb.lib.hku.hk
20576 HKU Webinar       Since the         Faculty of Law       Event       2020-77       https://tww.law.hku.h       Idacques Delisie       Event       https://tww.law.hku.h         20577 Iav       This seminar will        Webinar, Taw       Faculty of Law       Event       2021-02-09       4th Forth wave       https://tww.law.hku.h       Sarah Hinohilfé       Event       https://tww.law.hku.h         20578 (Webinar)       An online Book         Kevnt       2021-03-17       4th Forth wave       https://tww.law.hku.h       Ho Wai Loon       rp02632,pp       Matthew Little.Victor       Event       https://tps://pwb.lib.hku.         20578 (Webinar)       The University of         Webinar,       Faculty of Law       Event       2021-03-17       4th Forth wave       https://tww.law.hku.h       Sun Haochen       rp01270       Matthew Little.Victor       Event       https://pwb.lib.hku.         20580 CCPL:       The University of         Webinar,       Faculty of Law       Event       2022-05-25       5th Fifth wave       https://www.law.hku.h       Ng Hoi Kin       rp01274.pp0       Mathew       Event       https://pwb.lib.hku.         20581 CCPL:       The University of         Webinar, Faculty of Law       Event       2022-05-25       5	20575 A HKU	•	The presentation	<div< td=""><td>Webinar,</td><td>Faculty of Law</td><td>Event</td><td>2020-05-06</td><td>2nd Second wave</td><td>https://www.law.hku.h</td><td>Tang Brian W</td><td>nh00044</td><td></td><td>Event</td><td></td><td>https://pywb.lib.hku.hk</td></div<>	Webinar,	Faculty of Law	Event	2020-05-06	2nd Second wave	https://www.law.hku.h	Tang Brian W	nh00044		Event		https://pywb.lib.hku.hk
2057/1 ax       This seminar will       (div       Webinar, Tax       Faculty of Law       Event       2021-12-05       4th Forth wave       https://tww.Jaw.hku.h       Sarah Hinchillite       Event       https://tww.Jaw.hku.h         20578       (Webinar, Law, Faculty of Law       Event       2021-03-17       4th Forth wave       https://tww.Jaw.hku.h       Sun Haochen       rp02632, pl       Matthew Little, Victor       Event       https://tww.Jaw.hku.h         20578       Intellectual       The University of       (div       Webinar, Faculty of Law       Event       2021-03-17       4th Forth wave       https://tww.Jaw.hku.h       Sun Haochen       rp01274, rp0       Event       https://tww.Jaw.hku.h         20580       CCPL:       The University of       (div       Webinar,       Faculty of Law       Event       2022-05-25       5th Fifth wave       https://tww.Jaw.hku.h       Yap Po Jen.Jp Chi       rp01274, rp0       Event       https://tpw.bl.h.ku.         20581       CCPL:       The University of       (div       Webinar, Faculty of Law       Event       2022-05-25       5th Fifth wave       https://tww.Jaw.hku.h       Yap Po Jen.Jp Chi       rp01278       Charles Ho Wang Mak       Event       https://tww.Jaw.hku.h         20582       How the Inthis talk, the       (div       Webinar, Faculty of La	20576 HKU We	ebinar	Since the	<div .<="" td=""><td>Webinar,</td><td>Faculty of Law</td><td>Event</td><td>2020-05-15</td><td></td><td>https://www.law.hku.h</td><td></td><td></td><td>Jacques Delisle</td><td>Event</td><td></td><td>https://pywb.lib.hku.hk</td></div>	Webinar,	Faculty of Law	Event	2020-05-15		https://www.law.hku.h			Jacques Delisle	Event		https://pywb.lib.hku.hk
2058 [Webinar]       An online Book <div< td="">       Webinar, Law, Faculty of Law       Event       2021-03-17       4th Port wave       https://www.law.hku.hb       FoU2032/.p       Matchev Little, Victor       Event       https://www.law.hku.hb       FoU2032/.p       Matchev Little, Victor       Event       https://www.law.hku.hb       Sun Hanohen       rpU2032/.p       Event       https://www.law.hku.hb       Yap Po Jen.Jp Chi       rpU2032/.p       Event       https://www.law.hku.hb       Yap Po Jen.Jp Chi       rpU2032/.p       Event       https://www.law.hku.hb       Yap Po Jen.Jp Chi       rpU2032/.p       Event       https://www.law.hku.hb       Yap Po Jen.Jp C</div<>	20577 Tax		This seminar will	<div< td=""><td>Webinar, Lax</td><td>Faculty of Law</td><td>Event</td><td>2020-12-09</td><td>4th Forth wave</td><td>https://www.law.hku.h</td><td>11.11.0</td><td>00000</td><td>Sarah Hinchlitte</td><td>Event</td><td></td><td>https://pywb.lib.hku.hk</td></div<>	Webinar, Lax	Faculty of Law	Event	2020-12-09	4th Forth wave	https://www.law.hku.h	11.11.0	00000	Sarah Hinchlitte	Event		https://pywb.lib.hku.hk
20/53 Intellectual       Ine University of X div       Webinar, Faculty of Law       Event       2021-11-05       https://www.law.hkub.h       Sun Haochen       rpU1274 // Machan Sunder,Ruth       Event       https://pyb.lib.hku.         20580 CCPL:       The University of X div       Webinar, Faculty of Law       Event       2022-05-25       5th Fifth wave       https://www.law.hkub.h       Yap Po Jen,D Chi       rp01274 //pol       Event       https://pyb.lib.hku.         20580 CCPL:       The University of X div       Webinar, Faculty of Law       Event       2022-05-25       5th Fifth wave       https://www.law.hkub.h       Ng Hoi Kit       rp01274 //pol       Event       https://pyb.lib.hku.         20583 Ecol W dve       In this talk, the       K div       Webinar, Faculty of Law       Event       2022-05-25       5th Fifth wave       https://www.law.hkub.h       Zhao Yun       rp01278       Charles Ho Vang Mak       Event       https://pyb.lib.hku.         20583 Ecoling & The coronavirus       K div       vesymposium, Faculty of Law       Event       2023-02-28       5th Fifth wave       https://www.law.hkub.h       Meggit Gary.Kvok       rp01284 /rp0       Event       https://pyb.lib.hku.         20583 Ecol       Mith functionary       K div       Workshop,       Centre on Eenviroida       Event       https://pyb.lib.hku.       Meggi	20578 (Webina	ar)	An online Book	Kdiv	Webinar, Law,	Faculty of Law	Event	2021-03-17	4th Forth wave	https://www.law.hku.h	Ho Wai Loon	rpU2632,rp	Matthew Little, Victor	Event		https://pywb.lib.hku.hk
20580       CUPL:       The University of Kitw       Vap Po Jen, Jo Chi       rpU12/4,rpU       Event       https://pywb.lib.hku.         20581       CCPL:       The University of Kitw       Vap Po Jen, Jo Chi       rpU12/4,rpU       Event       https://pywb.lib.hku.         20581       CCPL:       The University of Kitw       Vap Po Jen, Jo Chi       rpU16/4,rpU       Event       https://pywb.lib.hku.         20582       How the       Initia talk, the       Kitw       Vap Po Jen, Jo Chi       rpU16/4,rpU       Event       https://pywb.lib.hku.         20582       How the       Kitw       Kitw       Kitw       Vap Po Jen, Jo Chi       rpU17/8       Charles Ho Vang Mak       Event       https://pywb.lib.hku.         20582       How the       Initia talk, the       Giv       Vebinar,       Faculty of Law       Event       2022-02-28       5th Fifth wave       https://www.law.hku.h       Zhao Yun       rp01033,rp       Event       https://pywb.lib.hku.         20584       AllFL       This seminar       Kdiv       Vebinar,       Faculty of Law       Event       Z023-02-28       5th Fifth wave       https://www.law.hku.hk/pr       Meggitt Gary.Kwok       rp01284,rpO       Event       https://pywb.lib.hku.         20586       From       With the funding	20579 Intellectr	tual	The University of	<div< td=""><td>Webinar,</td><td>Faculty of Law</td><td>Event</td><td>2021-11-05</td><td>E1 E41</td><td>https://www.law.hku.h</td><td>Sun Haochen</td><td>rpU1270</td><td>Madhavi Sunder, Ruth</td><td>Event</td><td></td><td>https://pywb.lib.hku.hk</td></div<>	Webinar,	Faculty of Law	Event	2021-11-05	E1 E41	https://www.law.hku.h	Sun Haochen	rpU1270	Madhavi Sunder, Ruth	Event		https://pywb.lib.hku.hk
20581 CLPL:       The University of Xity       Verbinar,       Faculty of Law       Event       2024/24-25       5th Fifth wave       https://www.law.hku.h       Ng Hoi Kit       rpU1383;rpU       Event       https://pywb.lib.hku.         20582 How In his talk, the       (div       Webinar,       Faculty of Law       Event       2024/24-25       5th Fifth wave       https://www.law.hku.h       Zhoa Yun       rpU1383;rpU       Event       Mttps://pywb.lib.hku.         20582 How In his talk, the       (div       Webinar, US-       Faculty of Law       Event       2022-12-09       5th Fifth wave       https://www.law.hku.h       Botelho Michael       rp01038;rpU       Event       https://pywb.lib.hku.         20583 From       Vith He funding       (div       Webinar,       Faculty of Law       Event       2022-12-09       5th Fifth wave       https://pywb.lib.hku.h       Meggitt Gary.Kwok       rp01038;rpU       Event       https://pywb.lib.hku.         20586 From       With He funding       (div       Vorkshop,       Centre on Behavioral       Event       2022-11-24       5th Fifth wave       https://www.lku.hk/pr       Event       https://pywb.lib.hku.         20586 HKU       Supported by       (div       Forum, Career       Centre on Behavioral       Event       2022-11-24       Sth Fifth wave       <	20580 CCPL:		The University of	Kdiv	Webinar,	Faculty of Law	Event	2022-05-24	5th Fifth wave	https://www.law.hku.h	Yap Po Jen, Ip Chi	rpU1274,rpU		Event		https://pywb.lib.hku.hk
20582 How the       In thirs tails, the <t< td=""><td>20581 CCPL:</td><td></td><td>The University of</td><td><div< td=""><td>Webinar,</td><td>Faculty of Law</td><td>Event</td><td>2022-05-25</td><td>5th Fifth wave</td><td>https://www.law.hku.h</td><td>Ng Hoi Kit</td><td>rpU1638,rpU</td><td>~</td><td>Event</td><td></td><td>https://pywb.lib.hku.hk</td></div<></td></t<>	20581 CCPL:		The University of	<div< td=""><td>Webinar,</td><td>Faculty of Law</td><td>Event</td><td>2022-05-25</td><td>5th Fifth wave</td><td>https://www.law.hku.h</td><td>Ng Hoi Kit</td><td>rpU1638,rpU</td><td>~</td><td>Event</td><td></td><td>https://pywb.lib.hku.hk</td></div<>	Webinar,	Faculty of Law	Event	2022-05-25	5th Fifth wave	https://www.law.hku.h	Ng Hoi Kit	rpU1638,rpU	~	Event		https://pywb.lib.hku.hk
20583       leaching & The coronavirus         e-symposium, Faculty of Law       Event       2022-12-09       5th Fifth wave       https://www.law.hku.h       Edetelho Michael       rpUUU33,rp       Event       https://pyub.lib.hku         20584       AllFL       This seminar        Kill       Supported by       Kill       Forum, Centre for Civil       Event       2022-11-22       Sth Fifth wave       https://www.hku.hk/pr       Event       https://www.hku.hk/pr       Event       https://www.bib.hku         20586       Fidd       Organised by the       Kdiv       Forum, Centre for Civil       Event       2022-11-22       Sth Fifth wave       https://www.hku.hk/pr       Event       https://www.hku.hk/pr         20587       Jookey Club       Organised by the       Kdiv       Forum, Career       Centre for Civil       Event       2022-11-23       Sth Fifth wave       https://www.hku.hk/pr       Event       https://www.hku.hk/pr	20582 How the	•	In this talk, the	<div .<="" td=""><td>Webinar, US-</td><td>Faculty of Law</td><td>Event</td><td>2022-08-11</td><td>5th Fifth wave</td><td>https://www.law.hku.h</td><td>Zhao Yun</td><td>rpU1278</td><td>Charles Ho Wang Mak</td><td>Event</td><td></td><td>https://pywb.lib.hku.hk</td></div>	Webinar, US-	Faculty of Law	Event	2022-08-11	5th Fifth wave	https://www.law.hku.h	Zhao Yun	rpU1278	Charles Ho Wang Mak	Event		https://pywb.lib.hku.hk
20584 AllFL       This seminar         Faculty of Law       Event       2023-02-26       5th Fifth wave        Meggitt Gary, Kwok       rpU1284, rpU       Event           20585 From       With the funding  <	20583 Teachin	ngŏ	The coronavirus	<div< td=""><td>e-symposium,</td><td>Faculty of Law</td><td>Event</td><td>2022-12-09</td><td>5th Fifth wave</td><td>https://www.law.hku.h</td><td>Botelho Michael</td><td>rp00033,rp</td><td></td><td>Event</td><td></td><td>https://pywb.lib.hku.hk</td></div<>	e-symposium,	Faculty of Law	Event	2022-12-09	5th Fifth wave	https://www.law.hku.h	Botelho Michael	rp00033,rp		Event		https://pywb.lib.hku.hk
20586 from       with the tunding         Cutte on Environ        Event        https://gwb.lb.htw.         20586 from       With the tunding         Supported by        Event        https://gwb.lb.htw.         20586 from       With the tunding          Event         https://gwb.lb.htw.         20586 from       Vith the tunding           Event            20586 from       Supported by	20584 AIFL		This seminar	Kdiv	Webinar,	Faculty of Law	Event	2023-02-28	5th Fifth wave	https://www.law.hku.h	Meggitt Gary,Kwok	rp01284,rp0		Event		https://pywb.lib.hku.hk
ZUSBb       HKU       Supported by       Cdiv       Forum,       Centre for Livit       Event       ZUZ2-1F-22       Sth Fifth wave <a href="https://www.hku.hk/pr">https://www.hku.hk/pr       Event       https://www.hku.hk/pr         20587       Jockey Club       Organised by the <div< td="">       Forum, Career       Centre for Civit       Event       https://www.hku.hk/pr       Event       https://www.hku.hk/pr</div<></a>	20585 From		With the funding	<div< td=""><td>Workshop,</td><td>Centre on Behaviora</td><td>al Event</td><td>2022-11-24</td><td>5th hifth wave</td><td>https://www.hku.hk/pr</td><td></td><td></td><td></td><td>Event</td><td></td><td>https://pywb.lib.hku.hk</td></div<>	Workshop,	Centre on Behaviora	al Event	2022-11-24	5th hifth wave	https://www.hku.hk/pr				Event		https://pywb.lib.hku.hk
20567 Jockey Liub Urganised by the Kdiv Forum, Lareer Centre for Livit Event 2022-11-16 5th Fifth wave <u>https://www.hku.hk/pr</u> Event https://pywb.lib.hku.	20586 HKU	01.1	Supported by	Kdiv	Forum,	Centre for Civil	Event	2022-11-22	5th Fifth wave	https://www.hku.hk/pr				Event		https://pywb.lib.hku.hk
200509 Andrew (r. The Earth of California Earth of Education Earth 2002 40 OE Education Earth of Education Education Earth of Education	20507 Jockeyi	CIUD	Urganised by the	kaiv	Forum, Career	E centre ror Civil	Event	2022-11-10	oth Firth wave	https://www.nku.nk/pr		1	1	Event		https://pywb.iib.nku.nk
20500 Adagemytor The Faculty of Kollwards Callwards Call	20500 Academ	ny ror	The Faculty of	Kaiv	Webinar,	Faculty of Education	n Event	2022-10-05	Sth Fifth wave	https://www.nku.nk/pr	Collegation Users	02267	Deul Cherr Me	Event		https://pywb.lib.nku.nk
20500 Inolight The Thought (all Conference, HKU Dusines's Event 2022-03-23 on Firm wave https://www.nku.nktp/ 20500 Inolight The Thought (all Conference, HKU Dusines's Event 2022-03-23 on Firm wave https://www.nku.nktp/ 20500 Inolight The Thought (all Conference, HKU Dusines's Event 2022-03-23 on Firm wave https://www.nku.nktp/	20503 Though	-	The Thought	K div	Conference,	HKU Dusiness	Event	2022-03-23	Sth Firth wave	https://www.nku.nk/pr	Cai nongbin, wong	rpuzzor,rp	Paul Chan Mo-	Event		https://pywb.iib.hku.hk
20530 Suidide The Suidide (a) Prentaineain, INSUCENTER Level 2022-03-23 Stim Firm wave https://www.insu.http://	20530 Suicide	e	The Juicide	< div	Plental nealth,	Control Centre for	Event	2022-03-23	Sth Fifth wave	https://www.nku.nk/pr				Event		https://pwb.iib.hku.hk
20051 Into dockey The oblevy The oblevy Call Valv Children, Centerio Device 2022-02-22 off intrive we industry modelling Call Call Call Call Call Call Call Cal	20592 HKU	скеу	The outbreak of	Kuiv Kaiv	Enrum	HKUBusiness	Event	2022-02-22	Juli Iuliwave	https://www.riku.rikipi				Event		https://pwb.ib.nkd.nk
20532 INU The Outpread of Value Factor (a Civil Event 2021-01-13 Industry March Inkp) Control Event (a Civil Event 1005:r/pyWorldo.nkc)	20532 HKU 20593 Partner	chin	The outbreak of	Kaiv Kaiv	Forum,	Contro for Civil	Event	2021-07-13		https://www.hku.hkipr			Witman Hung Daniel	Event		https://pww.lib.hku.hk
2005 Partnersmin me Collon V rotan, Centero da Collevia de	20594 "Confor	snip	With the fourth	Zdiu	Conference	HKUBusiness	Event	2021-00-14	4th Earth would	lattee Junua Jalan Jalar	Cai Hanabia Wana	re02267 re	Davi Domor Davi Chan	Event		https://pwb.ib.nkd.nk
2005 Contention Manual Contention, not Dosines Event 2021/01-14 Anti-on-Avent Indexinguity and Charles Contention and Contenti	20595 Educati	ion	The	- Zdiu	Wohings	Exculture Education	Event	2021-05-06	4th Forthwave	https://www.rika.nkipi	Wang Dhada Na Dita	p02201,ip	rau nomer, rau chan	Event		https://puwb.lib.hkg.hk
2005 Education in e vite webman, reduktion Event 2021-00-00 vite entry and an outpantition webman in the second vite entry and an outpantition webman in the second vite entry and an outpantition webman in the second vite entry and an outpantition webman in the second vite entry and an outpantition webman in the second vite entry and an outpantition webman in the second vite entry and an outpantition webman in the second vite entry and an outpantition webman in the second vite entry and an outpantition webman in the second vite entry and an outpantition of the second vite entry and the second	20596 Academ	nu for	The Epoulturof	Zdiu	Webinar,	Escultu of Education	Event	2021-03-00	4th Earth wave	lottor://www.rika.nkipi	wang hrioda, ng hita	11100043,11	Low Folling	Event		https://puwb.lib.hku.hk
20050 Roddeniyol meradayol dav webirar, radayol berk 2021-07-20 tan on web ragen webirar, radayol berk nagen yebi bir ka	20597 The 3rd	ily ioi	Persearch and	(div	ersumposium	Faculty of Education	Event	2021-04-23	4th Earth wave	https://www.inca.incipi	Zoute Olego A	ro01211	Low Letting	Event		https://puwb.lib.hka.hk
20050 me du neseardrand viv e-symposium, radukju niki Event 2027-222 vini oriniwave nuzimiju zakis olgan ipozni Event indosingvolitorika. 20150 h. dus De Besenker 7 Juliu Delse forma de Event 2027-222 vini oriniwave huber bila de	20599 The Ari		Op December 7	Kuiv Kaiv	Online forum	Acia Clobal Institute	Event	2021-02-22	4th Earth wave	https://www.riku.rikipi	Layis Olya M	101211		Event		https://pwb.iib.nkd.nk
	20599 Internat	ional	Besearch and	(div (div	Webinar	Escultu of Arts	Event	2020-09-23	Harr ordewave	https://www.inca.incpr				Poster		https://puwb.lib.hku.hk
20600 Method Hoteland Control	20600 Meet Hk	KLL I	With countless	(diu	Webinar, Data	iDendron	Event	2020-03-23		https://www.hku.hk/pr	Kouleff Loke	ob00047 o		Poster		https://puwb.lib.blu.bl
20601 HC1 Multikejejinga (du Dolne forum HC1 Event 2020 0 C Ingening we index and the birth Coefficient Coefficien	20601 HKU		Multidisciplinary	(diu	Online forum	HKU	Event	2020-05-10		https://www.bku.bk/pr	No ben,Loke	1.100041,11		Event		https://puwb.lib.kku.kk
20002 Workshory This optime U21 Online Department of Event 2022/15-11 4th Forth wave https://workshory Department of Event Department of Event	20602 Workshi	00:	This online	1121	Online	Department of	Event	2021-05-11	4th Forth wave	https://sociology.bku				Event		https://puwb.lib.bku.bk
20603 Georgia An internalay Mehinar School of Public Fent 2021-21-15 5th fifth wave https://www.fscool-d	20603 Genomi	ie	An internlay	An internlau	Webinar	School of Public	Event	2022-12-19	5th Fifth wave	https://www.trscouid-	Dhanasekaran	rp02721		Poster		https://puwb.lib.bku.bk
20504 Enidemiology Heterogeneous	20604 Epidemi	iology	Heterogeneous	Heterogeneou	Webinar	School of Public	Event	2022-12-19	5th Fifth wave	https://www.trscovid-	Adam Dillon Charles	rp03069		Poster		https://pywb.lib.hku.hk
20605 SARS-Coll-2 In the opposing Mehinar Department of Files 2022-08-26 Sith Fifth wave Intro-Manual Records	20605 5485-0	Coll-2	In the oppoing	In the oppoing	Wahinar	Department of	Fuent	2022-08-26	5th Fifth wave	https://www.trscouid-	Mak Judith Choi Wo	rp00352	1	Poster	1	https://puwb.lib.hku.hk



+ 🗾 🔄 🦟 🚖 🕞 Edit with Elemen	ntor	<b>D C</b>
ettings	*	Covid resources B
Resource ID Name: resource-id	WW_205	Summary
Resource title		video structure
Warme: resource-title	抗投展元 : 王允別總證當得 ? = Priority in fighting the pandemic: Who can control life and death?	Place_id_covid_resourc
Resource description	隔離確診新冠病毒的病人以防病毒課處。在法理上都是合理的;不過長者或垂危的病人會因此得不到親人的照顧。探訪而覺得特別孤獨甚至抑鬱。在反思法理與人情之間的平衡」	Visualisation
Name resource description		Contributor
Resource description 2 Name resource-description-2		Non HKU People
Resource date	August 15, 2021	HKU people
Name: resource-date		Organisation
Source URL Name: source-url	https://mmis.hkpl.gov.hk/coverpage/-/coverpage/view?p_r_p1078056564_c=QE757YsWv5%2Bn4efK8nHqLzd2nFx5Sqvc	RPID_covid resources
		News Author
Name citation		Resource type
Publisher		Wave of Covid
Name publisher		Subject
author_ordered		Category



## Web archiving

- ArchiveBox (A self-hosted web archiving)
  - Preserved the webpage as it can be taken down in the future
  - Save web archive files(WARCS), html, media
  - But Facebook post cannot be archived

ArchiveB	OX								ADD 🔶
Title, URL, tag	s, timestamp, or content Search 7681-7720 of 7758 total (Page 193 of 194)								
OKMARKED	SNAPSHOT (7758)	FILES							ORIGINAL URL
23-02-09 11:26AM	International Webinar Series for Exemplary Scholarship on "Teacher Education in Post-pandemic Times: The Singaporean Exper	0		bı		0			https://www.hku.hk/press/news_detail_22723.html
23-02-09 11:26AM	Education Seminar Series (17) by the Faculty of Education, HKU "Double Management: Management of Young Children to Facilitate S	0	a 💻	1	w	0		-	https://www.hku.hk/press/news_detail_22745.html
23-02-09 11:26AM	*Conference on The Future of Hong Kong Economy* Pools Collective Wisdom to Overcome Economic Fallouts and Restore Competitivene	0 9		1	W	0			https://www.hku.hk/press/news_detail_22823.html
23-02-09 11:26AM	Partnership for Sustainability Leadership in Business Holds Inaugural Knowledge Primer and Launches Sustainable Value Chains Co	0 8		1	M	•		-	https://www.hku.hk/press/news_detail_22908.html
23-02-09 11:26AM	HKU Business School Launches the First HR Leaders Forum Joins Hands with Deloitte to Gather Elites to Discuss Latest HR Trends	0 2		1		0			https://www.hku.hk/press/news_detail_23025.html
23-02-09 11:26AM	Nine HKU young scientists awarded China's Excellent Young Scientists Fund 2021 - All News - Media - HKU	0		1	W	0	-	-	https://www.hku.hk/press/news_detail_23146.html
23-02-09 11:26AM	HKU Engineering Professor Yuguo Li receives ASHRAE Holladay Distinguished Fellow Award - All News - Media - HKU	0 8	à 📕	1	W	0			https://www.hku.hk/press/news_detail_23152.html
23-02-09 11:26AM	HKU Scientists Receive 2021 Future Science Prize - All News - Media - HKU	0			W	6			https://www.hku.hk/press/news_detail_23247.html
23-02-09 11:26AM	iLab@HKU team wins in the buildingSMART International Awards 2021 - All News - Media - HKU	0		1	W	0		-	https://www.hku.hk/press/news_detail_23422.html
23-02-09 11:26AM	HKU Jockey Club "Play n Gain" Project "Social-emotional learning through play: Helping children stay connected in times of chal	0		1	W		-	-	https://www.hku.hk/press/news_detail_24131.html
23-02-09 11:26AM	HKU legal scholar Puja Kapai receives Global Pluralism Award for advocacy work on behalf of marginalized groups in Hong Kong	0 2		1	W	6		-	https://www.hku.hk/press/news_detail_24159.html
23-02-09 11:26AM	"Suicide Prevention Early Warning System" raises alarm on recent high-level suicide cases - All News - Media - HKU	0	a 📕	1	W	0			https://www.hku.hk/press/news_detail_24316.html
23-02-09 11:26AM	HKU's innovative research projects triumph at Special Edition 2022 Inventions Geneva Evaluation Days - All News - Media - HKU	0			w	0			https://www.hku.hk/press/news_detail_24318.html
23-02-09 11:26AM	"Conference on The Future Hong Kong Economy" explores the opportunities of Hong Kong's economic and policy development - All N	0		1		0		-	https://www.hku.hk/press/news_detail_25140.html
	Acceleration of the sector of	0 8		1		0		-	https://www.hku.hk/press/news_detail_25154.html
	ion to Expression: Arts-based Intervention in Helping Community-Dwelling Depressed Elderly - All News - Media -	0		1	w				https://www.hku.hk/press/news_detail_25376.html
	ollaborative Project for Inclusive Employment - Inclusive Career Platform HKU Joins Forces with Stakeholders to	0 2	8	1		6		-	https://www.hku.hk/press/news_detail_25388.html
手記	hip for Sustainability Leadership in Business hosts Knowledge Primer 4 - All News - Media - HKU	0		1	W	0		-	https://www.hku.hk/press/news_detail_25401.html
	awarded Croucher Senior Research Fellowships - All News - Media - HKU	0 =			W	<b>6</b> -		-	https://www.hku.hk/press/news_detail_25528.html
	) research named landmark paper in 200 years by The Lancet - A milestone signifying HKU's contributions in the	0		1		0		-	https://www.hku.hk/press/news_detail_25752.html?fbclid=1
	Jisconnected" HKU HKJC Centre for Suicide Research and Prevention releases the latest figures and prevention	0 8		1		0			https://www.hku.hk/press/press-releases/detail/21582.htm
	AVAILABLEI Croucher Summer Course Outbreak Investigation & Response to Pandemics	0		1	W		-		https://www.hkupasteur.hku.hk/post/call-for-application-cro





- Pywb (Python Wayback Machine)
  - Replay the archived web data stored in WARC
  - Easy for user to access the archived webpage





# How do we process the data?



## What information to be extracted from the scrapped data?

News: Text Research articles: Text Media: Video (get transcript: Text) Webpage: Text

Information to be extracted: Title, date, Description, people, organization, keywords

Method:

Applied NLP (HanLP) for Chinese entity before the release of OpenAI, but have text limit
Applied OpenAI LLM for

information extraction

呆障冷凍食品安全 嚴防病毒輸入風險	
Chan Sophia Siu Chee	
chool of Nursing	
Go to Link $\rightarrow$ Archive	
Description	Addition Details
局長網誌(前食物及衞生局): 為防止新冠病毒通過冷凍食品輸入和傳播、食物環境 衞生署加強對來自不同國家/地區進口的冷凍食品及其包裝進行檢測。已檢測超 過1,000個侵本,所有結果均為陰性。該部門還為冷凍食品行業的工人制定了加 強個人和環境衛生的指南,並為持牌冷藏庫工人安排自願和免費的病毒檢測。 Resource Type Article	Date: 2020-12-27 Wave of COVID: 4th Category: Welfare and Wellbeing Source URL: https://www.healthbureau.gov.hk/blog/cn/2020/post_202012
#個人衛生 #冷凍食品安全 #冷藏庫工人 #指南 #新冠病费防控 #環境衛生 #病毒 檢測 #進口冷凍食品 #食物環境衞生署	9 🔽 🛛 🗖 🛅



## Understand how does LLM work

- LLM is a deep learning model that based on transformers, a type of neutral network architecture
- Transformers architecture allows to train models on massive text dataset and learns context and meaning by tracking relationships in data.
- To simplify: LLM is a language model to learn the patterns and relationship between words





## **Foundation model functionality**



**Unlabelled data** 

**Foundation model** 

Tasks



## **Process data with Azure OpenAI LLM**

維生素A+精油治療恢復新冠患者嗅覺

後日 日 ① 日 ① 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日	Hung Fan Ngai Ivan Li Ka Shing Faculty of Medicine Go to Link → Archive	
Summarize text	Description 香港大學的一項研究發現,新冠肺炎患者失去嗅覺功能後,服用維生素A並使用 芳香療法可以改善病情。該團隊對兩名患者進行了全面評估,包括鼻腔內窺鏡檢 查、定量嗅覺靈敏度評估和大腦功能性磁力共振掃描。結果顯示,維生素A和芳 香療法的結合可以促進患者嗅覺感官和嗅覺神經網絡功能的恢復。 Journalist 郭詩詩	Addition Details Date: 2021-06-08 Category: News Source URL: https://paper.hket.com/article/2976803/%E7%B6%AD%E7%9 %E7%B2%BE%E6%B2%B9%E6%B2%BB%E7%99%82%20%E
Information Extraction	Publisher 香港經濟日報 Resource Type NewsArticle #嗅覺 #新冠肺炎 #維生素A #芳香痘底	Share

## Prompt

Example prompt: "You are a journalist. Extract people, organization,top 10 subjects (exclude COVID and \'hong kong\') and summary in traditional chinese and english. Desired JSON Format: {"people\_en":[],"people\_zh":[],"org\_en":[],"org\_zh":[],"summary\_en":"","summary\_zh":"","keyword\_en":[],"keyword\_zh":[]}"

Sample output: {"keyword\_en": ["Henry Fok Foundation", "Macau", "donation", "University of Hong Kong", "Li Ka Shing Faculty of Medicine", "epidemic monitoring program", "COVID-19", "community transmission", "10,000 participants", "12 weeks"], "keyword\_zh": ["澳門霍英東基金", "捐款", "香港大學", "李嘉 誠醫學院", "疫情監察計劃", "新冠病毒", "社區傳播", "一萬名參加者", "十二星期", "即時數據"], "summary\_en": "The Henry Fok Foundation in Macau has donated HKD 10 million to support the University of Hong Kong's Li Ka Shing Faculty of Medicine in implementing the 'United We Stand Epidemic Monitoring Program'. The program aims to collect real-time data from the local community to assess and monitor the community transmission of COVID-19 in Hong Kong. It will recruit 10,000 participants, including those who have completed or are currently participating in large-scale research projects managed by the HKU Faculty of Medicine's School of Public Health, as well as randomly sampled citizens from all 18 districts in Hong Kong. The program will begin soon and initially last for 12 weeks.", "summary\_zh": "澳門霍英東基金捐款一千萬港元支持香港大學李嘉誠醫學院推行「眾志成城疫情監察計劃」。該計劃旨在收集本港社區的即時 數據,以評估及監察香港新冠病毒的社區傳播情況。計劃將招募一萬名參加者,包括已完成或正在進行港大醫學院公共衛生學院管理的大型研究計劃 的參加者,以及全港十八區隨機抽樣的市民。計劃將於日內開始,初步為期十二星期。"}



## Process data with Azure OpenAI LLM (Example of worksheet)

headline	<b>T</b> source	<del>⊤</del> ageN(	<del>∓</del> ectio ∓	publishDate	$\pm$ news_url $\pm$ wisenews_docld $\pm$	fulltext \Xi	summary_zh		keywords_zh	\Xi keyw	vords_en 👳	people_zh	Ŧ	people_en	⇒ org_z	h <del>.</del>	org_en
尚港現病例	學者倡,明報	A04	港聞	2020-01-05	https://news.i news:2709^2020010	武漢肺炎病因	中大呼吸系統和	科講座 Professor Xu Shu	uch ["SARS", "冠狀病	毒", "淮 ["SARS	5", "coronaviru	["許樹昌", "	管軼" ["X	u Shuchang", "Kv	vol ["香港中文大	:學", "香港/	["Chinese University of He
袁國勇料內均	也已知》香港經	濟 A17	港聞	2020-01-08	https://paper.news:24jc^20200108	武漢不明肺炎	袁國勇表示,萨	內地經 Yuen Kwok-yung	, a ["武漢", "冠狀病	毒", "袁 ["Wuh	ian", "coronavi	["袁國勇"]	["Yi	uen Kwok-yung"]	["港大"]		["University of Hong Kong
何栢良促覓野	骨味源或 明報	A02	要聞	2020-01-10	https://news.i news:2790^2020011	武漢不明肺炎	專家估計武漢訊	冠狀病 Experts estimate	eth ["冠狀病毒", "武	漢", "洩["coro	navirus", "Wul	["黃婉婷", "(	可栢[["責	黃婉婷", "何栢良	"] ["台灣疾病管	制署", "香港	["Taiwan Centers for Dise
內地揭新冠制	大病毒者明報	A02	要聞	2020-01-10	https://news.i news:27j0^20200110	武漢不明肺炎	内地專家已經码	潅認武 Experts from ma	inl ["新型冠狀病毒"	', "武漢 ["new	coronavirus",	["袁國勇", "]	黃加!["Yi	uen Kwok-yung",	"H["香港大學",	"世界衛生約	["Hong Kong University",
武漢肺炎遇济	fill 底高峰晴報	P02	港聞	2020-01-10	https://skyposnews:25de^2020011	武漢不明肺炎	武漢肺炎病原體	體已被 The Wuhan pnet	um ["武漢肺炎", "新	型冠狀 ["Wuh	an pneumonia	["王月丹", "]	黃加』["W	Vang Yuedan", "H	ua ["衞生防護中	心", "港大"]	["Health Protection Cente
武漢肺炎元9	21 證實: 東方日	報 A01	要聞	2020-01-10	news:26di^20200110	湖北武漢近月	新型冠狀病毒日	己被謟 A new type of co	oro ["冠狀病毒", "武	漢肺炎 ["coro	navirus", "Wul	["袁國勇", "]	黃加!["Yi	uen Kwok-yung"]	["世界衛生組	織", "香港ナ	["World Health Organizati
港索基因圖譜	普 待內 星島日	報 A02	要聞	2020-01-10	https://std.sthnews:26e5^2020011	○三年沙士,	香港專家尚未餐	參與武 Hong Kong expe	rts ["冠狀病毒", "武	漢", "羞 ["coro	navirus", "Wul	["黃加慶", "	袁國 ["H	luang Jiaqing", "Y	ua ["衞生防護中	心","港大團	["Health Protection Cente
武漢肺炎斷為	局新冠制星島日	報 A02	要聞	2020-01-10	news:25ag^20200110	(武漢肺炎	中國武漢爆發的	的不明 A new type of co	oro ["冠狀病毒", "肺	炎", "武 ["coro	navirus", "pne	["徐建國", "	袁國 [ ["X	u Jianguo", "Yuer	n K ["香港大學"]		["Hong Kong University"]
不明肺炎。言	式漢證層 蘋果日	報 A01	要聞	2020-01-10	news:044i^20200110	武漢不明肺炎	中國專家初步判	判定武 Chinese experts	ha ["武漢肺炎", "新	型冠狀 ["Wuh	an pneumonia	["徐建國", "]	黃加!["X	u Jianguo", "Hua	ng ["國家衞健委	", "世界衞生	["National Health Commis
新病毒勢人優	專人 倘 東方日	報 A02	專題新	ff 2020-01-10	https://orientanews:25fc^20200110	湖北武漢市煬	香港專家呼籲市	市民加 Experts in Hong	Ko ["新型冠狀病毒"	', "個人 ["new	coronavirus",	["袁國勇", "(	可栢[["Yi	uen Kwok-yung",	"H["香港大學",	"香港中文力	["University of Hong Kong
武漢肺炎病應	原體初判香港仔	P01	要聞	2020-01-10	news:2614^2020011	武漢不明肺炎	根據初步實驗醫	室結果 The pathogen of	th ["冠狀病毒", "武	漢肺炎 ["coro	navirus", "Wul	["徐建國", "]	黃加!["X	u Jianguo", "Hua	ng ["國家衛生健	康委員會",	["National Health Commis
袁國勇籲假於	と病毒 可頭條日	報 P04	要聞	2020-01-10	news:04c2^20200110	内地專家組初	内地專家初步判	判定, Mainland expert	ːs <sub>f</sub> ["武漢", "肺炎",	"冠狀痘["Wuh	an", "pneumo	["袁國勇","]	王月/["Yi	uen Kwok-yung",	"V ["香港大學",	"北京大學",	["University of Hong Kong
未獲基因圖譜	普港府書明報	A08	港聞	2020-01-11	https://news.rnews:16bh^2020011	內地雖已破解	韓國和台灣敦(	足中國 South Korea and	Ta ["武漢肺炎", "基	因排序 ["Wuh	an pneumonia	["胡克", "何	栢良" ["H	lu Ke", "Ho Pak-le	ur ["香港衛生防	護中心", "者	["Hong Kong Centre for H
基因圖譜曝光	と武漢  明報	A05	港聞	2020-01-12	https://news.rnews:244d^2020011	内地專家在上	專家已破解武》	美肺炎 Experts have dee	coc ["新型冠狀病毒"	', "武漢 ["new	coronavirus",	["袁國勇", ")	馬仲(["Yu	uen Kwok-yung",	"∧["香港大學",	"公共醫療團	["Hong Kong University",
武漢新冠狀綱	病毒是0 成報	A03	港聞	2020-01-12	news:247f^20200112	有內地專家公	香港大學微生物	物學系 Hong Kong Unive	ers ["冠狀病毒", "沙	士", "蜩 ["coro	navirus", "SAR	["袁國勇", "]	黃加!["Yi	uen Kwok-yung",	"V ["香港大學",	"上海公共徿	["University of Hong Kong
新冠狀病毒丿	∖成似测星島日	報 A04	要聞	2020-01-12	news:24d9^2020011	武漢新型冠別	武漢衛健委報台	告新型 The Wuhan Heal	lth ["武漢", "冠狀病	毒", "肵 ["Wuh	an", "coronavi	["袁國勇"]	["Y	uen Kwok-yung"]	["武漢衛健委	","衞生防護	["Wuhan Health Commiss
專家料新病費	b 肺炎列文匯報	A05	文匯要	要 2020-01-12	news:149c^20200112	湖北省武漢市	湖北省武漢市新	新型冠 The first death c	ase ["武漢", "冠狀病	毒", "肵 ["Wuh	an", "coronavi	["袁國勇", "導	梁子‡["Yi	uen Kwok-yung",	"L ["香港大學",	"香港醫學會	["University of Hong Kong
基因圖譜網」	L曝光 蘋果日	報 A08	要聞	2020-01-12	news:06h2^2020011	由新型冠狀病	武漢肺炎疫情出	出現首 The first death fr	ror ["武漢肺炎", "沙	士", "व ["Wuh	an coronaviru	["袁國勇", "(	可栢[["Yi	uen Kwok-yung",	"H["香港大學",	"衞生署","	["Hong Kong University",
最接近浙江舟	9山蝙螈星島日	報 A04	要聞	2020-01-12	news:050f^20200112	內地仍然未正	香港大學教授詞	袁國勇 Yuen Kwok-yung	, a ["武漢病毒", "沙	士", "蜩 ["Wuh	an virus", "SAI	["袁國勇", "(	可栢[["Yi	uen Kwok-yung",	"H["香港大學"]		["University of Hong Kong
基因排序八届	战似沙∃ 東方日	報 A01	要聞	2020-01-12	news:2634^2020011	内地日前公布	中國已確認首知	宗武漢 The first death fr	ror ["武漢冠狀病毒"	', "沙士 ["Wuh	an coronaviru	["黃加慶", "	袁國!["H	luang Jiaqing", "Y	ue ["衞生防護中	心", "香港中	["Centre for Health Protein
港獲新冠狀綱	ສ <b>毒基□</b> 大公報	A03	要聞	2020-01-13	http://www.tanews:146f^20200113	世界衛生組綸	世界衛生組織日	🗄 出版 Healt Healt	h(["基因序列", "快	速測試 ["gene	etic sequence"	["何栢良"]	["H	lo Pak-leung"]	["世界衛生組	織", "香港衛	["World Health Organizati
港將獲新冠制	犬病毒基香港商	報 A02	重要新	斤 2020-01-13	https://www.ł news:06hc^2020011	衛生署衛生防	衛生署衛生防調	獲中心 The Centre for H	ea ["基因排序", "新	型冠狀 ["gene	e sequencing",	["何栢良"]	["H	le Bailiang"]	["衛生署", "御	5生防護中心	["Department of Health",
新冠狀病毒的	快速測計星島日	報 A06	港聞	2020-01-13	news:18eg^2020011	:武漢上月底開	衞生防護中心日	已接獲 The Centre for H	ea ["武漢肺炎", "基	因排序 ["Wuh	ian pneumonia	["何栢良"]	["H	lo Pak-leung"]	["衞生防護中	心", "國家衞	["Centre for Health Prote
武漢肺炎圖譜	普公開 🖁 am730	A01	NEWS	2020-01-13	https://www.anews:04da^2020011	武漢爆發由新	香港報告了6例	新型  Hong Kong repoi	rte ["武漢", "肺炎",	"冠狀症["Wuh	an", "pneumo	["譚德塞", "(	可栢[["Te	edros Adhanom (	Gh(["世界衛生組	織", "GISAIE	["World Health Organizati
新冠狀病毒/	V傳人 t 香港經	濟 A22	港聞	2020-01-15	news:15c8^2020011	武漢肺炎疫情	世界衞生組織法	登清, The World Healt	h(["武漢肺炎", "新	型冠狀 ["Wuh	ian pneumonia	["許樹昌", "(	可栢!["Te	edros Adhanom (	Gh(["世界衞生組	織", "路透社	["World Health Organizati
揻泰國確診個	固案世復 香港商	報 A03	重要新	斤 2020-01-15	https://www.ł news:156i^20200115	記者周偉立報	世界衛生組織	(WHC The World Healt	h(["新型冠狀病毒'	', "武漢 ["new	coronavirus",	["馮子健","	林鄭/["Fe	eng Zijian", "Carr	ie ["世界衛生組	織", "香港御	["World Health Organizati
專家促入境做	建康申氧 明報	A02	要聞	2020-01-16	https://news.i news:057i^20200116	武漢新冠狀病	香港新增5宗武	漢新 <sup>,</sup> Hong Kong has r	ep ["武漢新冠狀病	<b>寿", "健</b> ["Wuh	an coronaviru	["張竹君", "(	可栢[["C	heung Chuk-kwa	n",["香港大學",	"香港醫學專	["Hong Kong University",
內地不排除新	所病毒有明報	A02	要聞	2020-01-16	https://news.i news:04i8^20200116	内地對外公布	内地對外公布起	武漢肺 After half a mon	th {武漢肺炎,有限》	度人傳/{"Wuh	an pneumonia	"," limited hu	ıman-to-ł	human transmiss	ion"," seafood m	arket"," virus	"," investigation"}
日爆首宗確諸	⊘港更¥香港經	濟 A21	港聞	2020-01-17	news:23i9^20200117	武漢肺炎疫情	隨著武漢冠狀鄉	丙毒的 As the Wuhan co	oro ["武漢冠狀病毒"	', "日本 ["Wuh	an coronaviru	["陳肇始", "	袁國 ["C	hen Zhuoshi", "Y	ue ["香港大學",	"國家衛健國	["Hong Kong University",
日確診者服調	艮燒藥並明報	A03	港聞	2020-01-17	https://news.inews:03e9^2020011	武漢爆發新型	武漢爆發的新型	型冠狀 The new corona	vir ["新型冠狀病毒"	', "武漢 ["new	coronavirus",	["30多歲男子	F"] ["tł	he 30-year-old m	an ["世界衛生組	織", "香港會	["WHO", "Hong Kong Foo
港完成新冠制	犬病毒( 大公報	A07	要聞	2020-01-17	news:25kf^20200117	本港昨日再新	香港報告了兩胡	巴新的 Hong Kong repo	rte ["武漢肺炎", "快	速測試 ["Wuh	an pneumonia	["袁國勇"]	["Yi	uen Kwok-yung"]	["香港大學醫	學院", "衛生	["Hong Kong University N
專家促查病毒	<b>与動物福東方日</b>	報 A06	專題新	ff 2020-01-18	https://orientanews:0541^2020011	;武漢肺炎日前	有一宗新的武派	美肺炎 A new death cas	e v ["武漢肺炎", "快	速測試 ["Wuh	an virus", "rap	["袁國勇", "詞	許樹 ["Y	uen Kwok-yung",	"H["香港大學",	"香港中文力	["University of Hong Kong
專家料屬第二	-輪傳播香港經	濟 A13	港聞	2020-01-21	https://paper.news:02kd^2020012	武漢肺炎已有	香港大學專家書	警告, Experts from the	₂ U ["武漢肺炎", "爆	發", "來 ["Wuh	an pneumonia	["王月丹","]	脹竹ネ["₩	Vang Yuedan", "Z	ha ["香港大學",	"北京大學",	["University of Hong Kong

# YouTube video

- 1. Use YouTube API to search for relevant videos
- 2. Use YouTube API to get the transcript, if available.
- query='+("university of hong kong"|"hong kong university"|"香港大學"|HKU|"
   港大") +(covid|"新冠"|"肺炎" |coronavirus|pneumonia|epidemic|pandemic)'

query='+("university of hong kong"|"香港大學"|HKU|"港大") +("covid-19"|"新 冠"|"肺炎"|delta|omicron|coronavirus|epidemic|pandemic)'



## Video Transcription



**Extract Audio** 



Speech-to-text Service Azure.cognitiveservices.speech

正念抗疫 - 楊紫芝教授篇(一)

Yeung Tse Tse Rosie



Transcribe audio to text into preferred language



## **Process research article data**

Consistent Detection of 2019 Novel Coronavirus in Saliva

#### Major source: HKU Scholar Hub

#### Supplementary source:

Scopus, PubMed, Crossref

#### Abstract obtained from Scopus/PubMed/HKU Scholar Hub

- Citation in APA format
- From CiteAs API with DOI
- Subject from Crossref API/HKU Scholar Hub

#### To Kelvin Kai Tsang Owen Chan Kwok Yip Chik Yan Wu Tak Chiu Tak Yin Hung Kandamby Darshana H. Chan Jacky Man Chun Leung Wai Chik Thomas Shiu Hong Choi Chris Yau Chung Shine Hung Fan Ngai Ivan Fung Agnes Yim Fong Lung David Christopher Poon Rosana Anthony Wine Shan Raymond Cheng Vincent Chi Chan Jaspe Yuen Kwok Show less Fuk Woo Chung Department of Medicine, Department of Microbiology

•

•

- Authors in order (include both HKU and non- HKU scholar)
- Identify the HKU scholar (some scholar are not recorded in our scholar hub)
- Name normalization

#### Involved HKU department (check with affiliation)

#### Abstract

Go to Link

The 2019 novel coronavirus (2019-nCoV) was detected in the self-collected saliva of 91.7% (11/12) of patients. Serial saliva viral load monitoring generally showed a declining trend. Live virus was detected in saliva by viral culture. Saliva is a promising noninvasive specimen for diagnosis, monitoring, and infection control in patients with 2019-nCoV infection.

Archive

#### Citation

To, K. K.-W., Tsang, O. T.-Y., Yip, C. C.-Y., Chan, K.-H., Wu, T.-C., Chan, J. M.-C., ... Yuen, K.-Y. (2020, February 12). Consistent Detection of 2019 Novel Coronavirus in Saliva. *Clinical Infectious Diseases*. Oxford University Press (OUP). http://doi.org/10.1093/cid/ciaa149

Resource Type ScholarlyArticle

#### Addition Details

Date: 2020-08-01 Wave of COVID: 3rd Category: Research Source URL: http://dx.doi.org/10.1093/cid/ciaa143

Share





## Challenges

#### 1. Need to validate if the scrapped news and videos are truly related to HKU

- We have scrapped nearly 10,000 news. Even the news carried keywords "HKU" or "Covid-19", it maybe not related to HKU contribution/involvement
- Misinformation
- Required manpower on screening

#### 2. Variants of Name and Organization

e.g: Yuen Kwok Yung, Yuen-Kwok Yung, Kwok Yung Yuen; 香港大學醫學院公共衛生學院, 港大公共衛生學院, 香港大學李嘉誠醫學院公共衛生學院

- LLM extracted terms directly from the text content
- Do normalization, develop an authority list
- Use OpenRefine reconciliation
- Apply fuzzy matching with python to do approximate string matching



organisation_id	🚽 organisation	🔽 variant 🔤
0129	School of Public Health	香港大學李嘉誠醫學院公共衞生學院
0129	School of Public Health	港大醫學院公共衛生學院公共衛生實驗室科學分部
0129	School of Public Health	香港大學醫學院公共衛生學院
0129	School of Public Health	香港大學醫學院公共衛生學院
0129	School of Public Health	香港大學李嘉誠醫學院公共衛生學院
0129	School of Public Health	香港大學公共衞生學院研究
0129	School of Public Health	香港大學醫學院公共衞生實驗室科學分部
0129	School of Public Health	香港大學公共衞生學院
0129	School of Public Health	港大公共衞生學院流行病
0129	School of Public Health	香港大學醫學院公共衞生學院
0129	School of Public Health	港大醫學院公共衞生學院公共衞生實驗室
0129	School of Public Health	港大醫學院公共衞生學院
0129	School of Public Health	香港大學醫學院公共衞生學院
0129	School of Public Health	港大公共衞生學院實驗室
0129	School of Public Health	港大李嘉誠醫學院公共衛生學院
0129	School of Public Health	香港大學公共衞生實驗室
0129	School of Public Health	港大公共衞生學院
0129	School of Public Health	港大李嘉誠醫學院公共衞生學院
0129	School of Public Health	香港大學李嘉誠醫學院公共衛生學院
0129	School of Public Health	港大公共衞生學院
0129	School of Public Health	港大醫學院公共衞生學院運動學分部
0129	School of Public Health	香港大學李嘉誠醫學院公共衞生學院「賽馬會智家樂計劃」團隊
0129	School of Public Health	香港大學公共衞生學院實驗室
0129	School of Public Health	港大醫學院公共衛生學院
0129	School of Public Health	港大公共衞生實驗室
0129	School of Public Health	港大醫學院公共衞生學院抗生素耐藥性研究組
0129	School of Public Health	香港大學公共衞生學
0129	School of Public Health	香港大學李嘉誠醫學院公共衞生學院「
O129	School of Public Health	港大李嘉誠醫學院公共衛生學院
O129	School of Public Health	港大公共衞生學院實驗室
O129	School of Public Health	香港大學公共衞生學院研究
O129	School of Public Health	港大醫學院公共衛生學院流行病和生物統計學分部



## Challenges

- 3. Use OpenAI LLM for information extraction can give you different output format
  - Affect data injection
  - Highly depends on the prompt

  - Sample output: {"keyword\_en": ["Henry Fok Foundation", "Macau", "donation", "University of Hong Kong", "Li Ka Shing Faculty of Medicine", "epidemic monitoring program", "COVID-19", "community transmission", "10,000 participants", "12 weeks"], "keyword\_zh": ["澳門霍英東基金", "拐款", " 香港大學", "李嘉誠醫學院", "疫情監察計劃", "新冠病毒", "社區傳播", "一萬名參加者", "十二星期", "即時數據"], "summary\_en": "The Henry Fok Foundation in Macau has donated HKD 10 million to support the University of Hong Kong's Li Ka Shing Faculty of Medicine in im plementing the 'United We Stand Epidemic Monitoring Program'. The program aims to collect real-time data from the local community to assess and monitor the community transmission of COVID-19 in Hong Kong. It will recruit 10,000 participants, including those who have completed or are currently participating in large-scale research projects managed by the HKU Faculty of Medicine's School of Public Health, as well as randomly sampled citizens from all 18 districts in Hong Kong. The program will begin soon and initially last for 12 weeks.", "summary\_zh": "澳門霍英東基金捐款一千萬港元支持香港大學李嘉誠醫學院推行「眾志 成城疫情監察計劃」。該計劃旨在收集本港社區的即時數據,以評估及監察香港新冠病毒的社區傳播情況。計劃將招募一萬名參加者,包括已完 成或正在進行港大醫學院公共衛生學院管理的大型研究計劃的參加者,以及全港十八區隨機抽樣的市民。計劃將於日內開始,初步為期十二星期。"}



## **Best practices for prompt engineering**

- 1. Put instruction at the beginning of prompt
- 2. Include context
- 3. Use specific, descriptive, as detailed as possible
- 4. desired output format
- 5. Provide few-shot example if possible

#### Less Effective:

Extract the entities mentioned in the text below. Extract the following 4 entity types: company names, people names, specific topics and themes.

Text: {text}

#### Better:

Extract the important entities mentioned in the text below. First extract all company names, then extract all people names, then extract specific topics which fit the content and finally extract general overarching themes

Desired format:

Company names: <comma\_separated\_list\_of\_company\_names> People names: -||-Specific topics: -||-

General themes: -||-

Text: {text}



## Challenges

#### 4. The keywords extracted from GPT has different variants

term_id 🔐	Word	
3978	aerosol	
50100	fecal aerosols	
50099	respiratory aerosols	
12016	respiratory droplets	
58879	age limit	
59149	age requirement	
50091	AI	
50362	AI technologies	
67	Artificial intelligence	
7185	artificial intelligence learning	
1651	Machine learning	
58488	air crew	
59156	aircrews	
59020	airport ground crew	
59013	cabin crew	
59158	crew members	
58740	air transmission	
2426	Airborne Infection	
678	airborne particles	
85	Airborne transmission	
50101	short-range airborne transmission	
59051	air travel bubble	
58633	travel bubble	
59184	airport cleaner	
2914	coating	
59062	airport workers	



## **Keyword/subject clustering**

Application of K-means clustering for keyword/subject clustering using Unsupervised Machine Learning



# 2,5

# How do we visualize the data?



## Partnerships for COVID-19 Research at HKU

The worldwide partners for COVID-19 research at HKU represent an expansive network of collaborative partnerships with leading experts and organizations from around the world. HKU's global network of collaborative partnerships enables the university to work with institutions and professionals from different fields and regions, leveraging their collective knowledge and capabilities to advance research in vaccine development, epidemiology, public health, and social and behavioral sciences.



The map below is an interactive visualization showcasing global collaboration. As you zoom in, you'll unveil the names of collaborators involved in each endeavor, providing a deeper understanding of the individuals and organizations driving these collaborative efforts.







A tree map to show the collaboration partnership with other institutions.



- 1. Download and extract affiliations of researchers by Scopus Search API
- 2. Use GoogleMap Geocoding API to get the lat, long data
- 3. Reconcile coordinates against ISO-3166 (Country Codes)

4. Data analytics methods to find the geo-relationship among all data



	А	В	С	D	E	F	G
1	affiliation_id $=$	affiliation_name $=$	affiliation_ci <del>=</del>	affiliation_c <del>=</del>	lat 🛛 🕇	lon $\overline{\ =}$	count =
2625	60014991	European Centre for Disease Prevention ar	Solna	Sweden	59.3726	18.0168298	4
2626	60014991	European Centre for Disease Prevention an	Stockholm	Sweden	59.3726	18.0168298	4
2627	60007420	Karlstad Central Hospital	Karlstad	Sweden	59.3749398	13.4804298	1
2628	60275452	North Estonia Medical Centre	Tallinn	Estonia	59.3983667	24.7010389	1
2629	60111747	University of South-Eastern Norway	Kongsberg	Norway	59.568633	9.2788923	1
2630	60003858	Uppsala Universitet	Uppsala	Sweden	59.8509005	17.6300093	3
2631	60010348	Universitetet i Oslo	Oslo	Norway	59.9404992	10.7215296	5
2632	60105037	Oslo Universitetssykehus	Oslo	Norway	59.9512235	10.7218215	1
2633	60028444	Modum Bad	Modum	Norway	59.9677413	9.942791	2
2634	60002952	Helsingin Yliopisto	Helsinki	Finland	60.1726348	24.9510419	5
2635	60103653	Aalto University	Espoo	Finland	60.1866693	24.827682	1
2636	60016987	Helsinki University Hospital	Helsinki	Finland	60.2025011	24.9072624	3
2637	60028758	Finnish Red Cross Blood Service	Helsinki	Finland	60.29427677	24.84676934	1
2638	60030280	Haukeland Universitetssjukehus	Bergen	Norway	60.3732829	5.3591418	3
2639	60114851	NORCE Norwegian Research Centre AS	Bergen	Norway	60.3840971	5.3333402	1
2640	60029622	Universitetet i Bergen	Bergen	Norway	60.3878586	5.3217549	1
2641	60006876	Turun yliopisto	Turku	Finland	60.4542267	22.284785	2
2642	60011916	Norwegian Institute of Public Health	Oslo	Norway	60.472024	8.468946	1
2643	126876717	SAG Flowmedik Oy	Helsinki	Finland	61.0030743	24.4796698	1
2644	60011170	Tampere University	Tampere	Finland	61.4941073	23.7792354	1
2645	60008760	University Hospital of Tampere	Tampere	Finland	61.4977524	23.7609535	10
2646	114085680	Russian Clinical and Research Center of G	Moscow	Russian Federat	61.52401	105.318756	1
2647	60013141	Norges Teknisk-Naturvitenskapelige Univer	Trondheim	Norway	63.4194872	10.401994	1
2648	60105357	Institute of Biology of the Komi Science Cer	Syktyvkar	Russian Federat	63.8630539	54.8312689	1



	А	В	С	D	E		F	G	Н	I	J	
1	count =	affiliation_id $=$	affiliation_name $=$	affiliation_ci <del>-</del>	affiliation_country	ISO	Ŧ	lat $=$	Ion $=$	Ŧ	÷	
36	593	60023691	University of California, San Francisco	San Francisco	United States	US		37.7626459	-122.4587106			
37	583	60027708	Tehran University of Medical Sciences	Tehran	Iran	IR		35.7058231	51.3941861			
38	579	60000481	Università degli Studi di Padova	Padua	Italy	IT		45.4067393	11.8771509			
39	575	60017161	National University of Singapore	Singapore City	Singapore	SG		1.2966426	103.7763939			
40	575	60012311	Karolinska Institutet	Stockholm	Sweden	SE		59.3481484	18.0236578			
41	571	60026245	Charité – Universitätsmedizin Berlin	Berlin	Germany	DE		52.5264618	13.3766245			
42	569	60017994	Yale School of Medicine	New Haven	United States	US		41.30323	-72.9338698			
43	569	60031101	University of Cambridge	Cambridge	United Kingdom	GB		52.20551377	0.1131679971			
44	564	60032838	Stanford University School of Medicine	Stanford	United States	US		37.4318102	-122.175758			
45	560	60002593	Southern Medical University	Guangzhou	China	CN		23.182586	113.334184			
46	550	60026004	Fundacao Oswaldo Cruz	Rio de Janeiro	Brazil	BR		-22.8772312	-43.243633			
47	538	60007997	Weill Cornell Medicine	New York	United States	US		40.7649151	-73.954897			
48	533	60122389	Zhongnan Hospital of Wuhan University	Wuhan	China	CN		30.552985	114.353743			
49	531	60080982	Renmin Hospital of Wuhan University	Wuhan	China	CN		30.535357	114.299525			
50	528	60001117	Johns Hopkins School of Medicine	Baltimore	United States	US		39.2992161	-76.5933799			
51	527	60004582	King Abdulaziz University	Jeddah	Saudi Arabia	SA		21.493472	39.2535			
52	526	60013983	City University of Hong Kong	Hong Kong	Hong Kong	HK		22.3370342	114.17272			
53	525	60011520	King's College London	London	United Kingdom	GB		51.51163327	-0.1160077318			
54	523	60029929	Massachusetts General Hospital	Boston	United States	US		42.3625677	-71.0687661			
55	522	60032350	Sapienza Università di Roma	Rome	Italy	IT		41.9037626	12.5144384			
			Chinoso Acadomy of Modical									

+

 $\equiv$ 

all citations 🔹 Sheet5 🝷

Sheet3 🔹 coordinates 👻 ISO3166 👻 googlemap\_coord\_result 👻 googleMap\_place\_search\_result 👻

co-authors\_affiliation



55146	1	120952080	Knowledge Translation and Health Technology Assessment in Health Equity	Ottawa	Canada	CA	**ERROR: ZERO_RESULTS	
55147	1	121500646	WHO GARD Planning Group	Salvador	Brazil	BR	**ERROR: ZERO_RESULTS	
55148	1	125545212	WHO RNTCP Technical Support Network	Kolkata	India	IN	**ERROR: ZERO_RESULTS	
55149	1	117493693	Wildlife Veterinary Consulting	Livermore	United States	US	**ERROR: ZERO_RESULTS	
55150	1	125944287	Women Leaders for Planetary Health	Berlin	Germany	DE	**ERROR: ZERO_RESULTS	
55151	1	121322659	Women's Brain Project	Zurich	Switzerland	СН	**ERROR: ZERO_RESULTS	
55152	1	124788059	Women's Brain Project (WBP)	Gunterhausen	Switzerland	СН	**ERROR: ZERO_RESULTS	
55153	1	127394056	WONCA World President			#N/A	**ERROR: ZERO_RESULTS	
55154	1	125256312	Workday Integration Architect Huntington	Columbus	United States	US	**ERROR: ZERO_RESULTS	
55155	1	112922920	World Federation for Mental Health	Woodbridge	United States	US	**ERROR: ZERO_RESULTS	
55156	1	128934471	World Health Network	Son	Norway	NO	**ERROR: ZERO_RESULTS	
55157	1	126777719	World Laureates Association	Shanghai	China	CN	**ERROR: ZERO_RESULTS	



#### The Worldwide Influence of HKU's COVID-19 Research

HKU's COVID-19 research output has had a profound effect worldwide. This interactive map depicts the research output cited by prominent institutions. It offers a compelling visual representation, illustrating the extent of HKU research paper's influence and fostering a deeper understanding of the pandemic on a global scale.

### A bubble map to reveal the impact of HKU's COVID-19 research

GIS

HKU



- 1. By using by Scopus Search API, download and extract affiliations of those research papers that cited HKU COVID research papers.
- 2. Use GoogleMap Geocoding API to get the lat, long data



### A Timeline for HKU to battle COVID-19

#### https://covid19.lib.hku.hk/timelines

Explore our interactive timeline to dive into Hong Kong's COVID-19 events, HKU Campus actions, and HKU community services. Discover how HKU has contributed to public health during these challenging times.







	А		В	С	D		E			F	N	G	Н			1	J		К		
1		Ŧ	ID =	date 📼	URL =	title		Ŧ	URL_image	e <del>.</del>	Desc		Ŧ	- 載	谕入個案	T	Fulltext	-			
44		•	N000043	2020-01-24	4 https://v	Public hos	pitals mobilise re	source	https://www	.news.gov.hk	€ The F	lospital Aut	nority ຮັAL	SE <mark>坩</mark>	曾隔離病房病尿	₹ 連串措施抗疫	The Hospital Aut	no 醫院管理局:	表示,因應	新型冠制	犬病毒
45		•	N000044	2020-01-24	4 https://v	Health dec	laration applies t	to XRL	https://www	.news.gov.hk	The E	)epartment	of Hea <sup>:</sup> AL	SE 🕅	兩人確診染病 🛛	这府加強防疫	The Government	w 本港兩宗輸	入的新型冠	就病毒®	<sup>《</sup> 染高
46		•	N000045	2020-01-24	4 https://v	70 Wuhan-	related cases re	cordec	https://www	.news.gov.hk	€ The F	lospital Autl	nority s <sup>-</sup> AL	SF 2	公立醫院錄70月	宗武漢相關病例	The Hospital Aut	no 醫院管理局:	表示,截至	至中午12B	寺,公
47		•	N000046	2020-01-25	5 https://v	LNY schoo	l holiday extend	ed	https://www	.news.gov.hk	The E	Education B	ureau <del>(</del> AL	SE 🛓	全港學校延至下	「月17日復課	The Education B	ur 教育局局長	楊潤雄表示	,為保障	≨學童
48		•	N000048	2020-01-25	5 https://v	65 Wuhan-	related cases re	cordec	https://www	.news.gov.hk	€ The H	lospital Aut	nority s <sup>E</sup> AL	SF 2	公立醫院錄65月	宗武漢相關病例	The Hospital Aut	no 醫院管理局:	表示,截至	Ē中午12₿	寺,公
49		•	N000049	2020-01-26	6 https://v	No delay ir	n fight against vir	rus: CE	https://www	.news.gov.hk	The G	Government	did no <sup>-</sup> AL	SE 7	<mark>六大策略應對</mark> 新	「型冠狀病毒疫情	(To watch the vid	ec 行政長官林	鄭月娥公布	示大策略	各,應
50		•	N000050	2020-01-26	6 https://v	Hospital vis	sits suspended		https://www	.news.gov.hk	€ The F	lospital Aut	nority &AL	SE 🖉	醫管局宣布暫停	<sup>客</sup> 公院探訪安排	The Hospital Aut	no 醫院管理局	宣布,因應	<b>取府就</b> 新	后型冠
51		•	N000051	2020-01-26	6 https://v	Quarantine	e centre sites exp	plained	https://www	.news.gov.hk	The C	Centre for He	ealth FAL	SE 打	<sub>亢疫</sub> 隔離設施優	<b>题先考慮度假村</b>	The Centre for H	ee 衞生防護中/	心重申,在	安排為沒	夏有出
52		•	N000052	2020-01-26	6 https://v	77 Wuhan-	related cases re	cordec	https://www	.news.gov.hk	€ The F	lospital Aut	nority s <sup>E</sup> AL	SF 2	公立醫院錄77月	宗武漢相關病例	The Hospital Aut	no 醫院管理局:	表示,截至	॒ 中午12₿	寺,公
53		•	N000053	2020-01-27	7 https://v	HK bans H	lubei residents to	o fight v	https://www	.news.gov.hk	Hong	Kong will in	npose <sup>:</sup> AL	SE 🖪	段府宣布限制 湖	1比省居民到港	Hong Kong will ir	np 新型冠狀病	事感染疫情	的督導委	2員會
54	#infection	•	N000054	2020-01-27	7 https://v	6th infectio	n case announc	ed	https://www	.news.gov.hk	The s	ixth importe	d case AL	SE 4	本港確診第六宗	《新型肺炎個案	(To watch the vid	ec 本港確診第:	六宗輸入的	新型冠制	犬病毒
55	#infection	•	N000055	2020-01-27	7 https://v	2 new infe	ctions confirmed		https://www	.news.gov.hk	e Two r	new importe	d case <sup>-</sup> AL	SE 4	本港新增兩宗新	「型肺炎個案	Two new importe	d 本港新增兩	宗輸入的新	f型冠狀症	寿毒感
56		•	N000056	2020-01-28	B https://v	Advice for	citizens who visi	ted Hu	https://www	.news.gov.hk	The E	)epartment	of Hea <sup>:</sup> AL	SE ≯	<mark>巷人湖北返港須</mark>	自申報	The Department	of 衞生署表示	,14日内曾	曾往湖北的	内香港
57		•	N000057	2020-01-28	B https://v	Gov't rejec	ts disease-relate	ed rum	https://www	.news.gov.hk	The G	Government	dismisAL	SE 🎚	段府澄清有關處	國理疫情謠言	The Government	tc 有網上貼文	指行政長官	3林鄭月娟	加意
58		•	N000058	2020-01-28	B https://v	78 Wuhan-	related cases re	cordec	https://www	.news.gov.hk	The F	lospital Aut	nority s <sup>E</sup> AL	SF 2	公立醫院錄78月	宗武漢相關病例	The Hospital Aut	no 醫院管理局	表示,截至	中午12	寺, 公
59		•	N000059	2020-01-29	9 https://v	Further me	asures to fight v	virus	https://www	.news.gov.hk	Chief	Executive (	Carrie FAL	SE 🗒	<sup>段府公布新一輪</sup>	à措施應對疫情	(To watch the vid	ec 行政長官林	鄭月娥公布	新一輪措	<b>吉施</b> 應
60		•	N000060	2020-01-29	9 https://v	2 initially te	est positive for vi	rus	https://www	.news.gov.hk	Prelin	ninary tests	show FAL	SE 4	本港增兩宗新型	2肺炎懷疑個案	(To watch the vid	ec 本港新增兩	宗新型冠肋	(病毒感)	2013
61		•	N000061	2020-01-29	9 https://v	56 Wuhan-	related cases re	ported	https://www	.news.gov.hk	The F	lospital Aut	nority s <sup>E</sup> AL	SE 1	2名醫護符武漢	真病例呈報準則	(To watch the vid	ec 醫院管理局	表示,截至	1月29日	中午
62		•	N000062	2020-01-30	0 https://v	HK probes	2 infection case	s	https://www	.news.gov.hk	The C	Centre for He	ealth FAL	SE 4	本港再添兩宗新	「型肺炎個案	The Centre for H	ea 本港新增兩	宗輸入的新	f型冠狀病	寿毒感
63		•	N000063	2020-01-30	0 https://v	95 Wuhan-	related cases re	ported	https://www	.news.gov.hk	€ The F	lospital Aut	nority s <sup>E</sup> AL	SE 1	4醫護符武漢病	<b>涛例呈報準則</b>	The Hospital Aut	no 醫院管理局:	表示,截至	॒ 中午12₿	寺,14
64	#infection	•	N000064	2020-01-31	1 https://v	2 more infe	ections confirmed	d	https://www	.news.gov.hk	The C	Centre for He	ealth FAL	SE ₿	新型冠狀病毒確	診個案增兩宗	The Centre for H	ee 衞生防護中/	心正調查兩	京宗新増新	后型冠
65		•	N000065	2020-02-01	1 https://v	FSD units	to provide basic	service	https://www	.news.gov.hk	The F	ire Services	s Depa <sup>:</sup> AL	SI 🕅	防火單位周一起	2提供基本服務	The Fire Services	【因應疫情發】	展,政府延	長僱員特	朝上
66		•	N000066	2020-02-02	2 https://v	Academy f	it for quarantine	use	https://www	.news.gov.hk	The G	Government	says iFAL	SI 🗒	曉宗頤文化館搊	歷作檢疫中心	The Government	tc 食物及衞生	同表示,有	迫切需要	是盡快
67	#infection	•	N000067	2020-02-02	2 https://v	CHP confir	ms another infe	ction ca	https://www	.news.gov.hk	The C	Centre for He	ealth FAL	SE ₿	新型冠狀病毒確	i 診個案再増一宗	The Centre for H	ea 本港新增一	宗新型冠肋	(病毒感)	除確診
68	#infection	•	N000068	2020-02-02	2 https://v	Local trans	mission not rule	d out	https://www	.news.gov.hk	The C	Centre for He	ealth FAL	SE 🕅	兩確診個案病源	原不清晰	(To watch the vid	ec 衞生署衞生	防護中心傳	₽ 染病處主	E任張



#### HKU WARRIORS: FIGHTING COVID-19 ACROSS HONG KONG'S NEIGHBORHOODS

This interactive map is designed to provide a comprehensive visualization of the places visited by the HKU team during the pandemic. Collabroating with government officials, our people visited various areas in Hong Kong during COVID-19 to investigate and respond to virus outbreaks.



#### 2020-07-15 Queen Elizabeth Hospital 伊利沙伯醫院

#### Reason for visit

Hospital infection control measures exposed flaws, multiple people diagnosed with COVID-19 醫院防感染措施出現漏洞,多人確診新冠肺炎 Findings In-hospital infection occurred, likely due to environmental contamination

院内感染已發生,可能由於環境污染導致 Details

伊院病房爆疫同格3人確診

A story map to illustrate the places visited by HKU team during the pandemic





#### https://covid19.lib.hku.hk/story/map-3

### InteractBot (Beta)

2

Welcome to our COVID-19 Digital Archives InteractBot, an advanced AI-driven platform powered by OpenAI LLM technology, designed to assist and provide you with reliable information regarding the content in this Digital Archives. Our InteractBot is here to answer your questions.

# Chat with InteractBot by sending queries below...

How did HKU contribute to battle COVID19?



ŵ

HKU researchers were at the forefront in responding to the emergency. They examined and assessed the size and epidemiological characteristics of the epidemic at its earliest stages in Wuhan. They were the first to publish data on person-to-person transmission of COVID19 in a familial cluster of patients diagnosed and managed at the HKU Shenzhen Hospital. They were also the first to document that the immunity gained from recovery may be short-lived and that human reinfection is possible. HKU is opening a Community Vaccination Centre (CVC) at Loke Yew Hall, providing 2,000 vaccine doses a day.

**Helpful Questions:** 

1. What other research has HKU conducted on COVID19?

2. What is the HKU COVID-19 Digital Archive?

A Chatbot powered by OpenAI LLM technology to enable user to retrieve information in an interactive way.



## **Built Chatbot with Retrieval Augmented Generation (RAG)**



Image ref: https://scriv.ai/guides/retrieval-augmented-generation-overview/



# Thank you!



