



Cultural sustainability using the power of data analytics

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We use the internet to find cultural information because even with all its faults, it is still the most open, accessible and comprehensive data archival system in existence. However such a system does not mean cultural knowledge within it is complete or discoverable.

To curate, organize and update are daunting work even for a large volunteer community like Wikimedia¹. What we can do is to leverage UNESCO members' support for open data^{2,3}, then use automated data analysis to pinpoint knowledge gaps and fill these gaps with on-point contribution from experts. This methodology would also allow indexing at scale (discoverability) and perhaps even help resolve conflicting / duplicate information (see **Critic of Wikipedia** below).

1

https://en.wikipedia.org/wiki/Wikipedia:WikiProject_United_Nations

https://meta.wikimedia.org/wiki/Grants:Project/UNESCO/Wikimedian_in_Residence_at_UNESCO_2019-2020

² Video - *Joint Appeal on Open Science by UNESCO, WHO, CERN and the Office of the United Nations High Commissioner for Human Rights* - Oct 27 2020
<http://webtv.un.org/watch/joint-appeal-on-open-science-by-unesco-who-cern-and-the-office-of-the-united-nations-high-commissioner-for-human-rights/6205018377001/>

³ *First draft of the UNESCO Recommendation on Open Science* - Dec 31 2020

<https://unesdoc.unesco.org/ark:/48223/pf0000374837>

Ceramic Art "Silk Road" by Guo Aihe

Here is a quote from Professor Maria Fasli UNESCO, Chair in Analytics and Data Science:

*“We need to break down silos to solve real problems and harness the power of data and computational technologies for the benefit of all. The cornerstone of the Chair’s work is that data and the data revolution should be all about people. Being able to work with people from diverse disciplinary, **cultural**, economic, racial, national and educational backgrounds ...”⁴*

The cultural history of the Silk Road is the perfect topic for data science analysis, there are difficult to reach areas, wide varieties of languages, abundance of artifacts, etc...

Practically we have the following tasks:

- 1) To leverage the growing open science data to stay current; especially non-digital non-English citizen reports and private auction data
- 2) Use web crawler⁵ and data analysis methodology to find gaps and automatically reach out to researchers requesting

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<https://unesco.org.uk/chairs/chair-on-analytics-and-data-science-at-the-university-of-essex>

⁵ *Preliminary report on the first draft of the Recommendation on Open Science*

<https://unesdoc.unesco.org/ark:/48223/pf0000374409>

them to link their finding appropriately, thereby scaling the knowledge gathering and organization

- 3) Creating more links between museums and creating backlinks from these pages to a UNESCO page on the silk road⁶, which would significantly improve the search ranking and become the de-facto entry point for the term

In essence, by building a Data Silk Road one link at a time, we will build a network of routes for anyone to reach the farthest expanse of cultural knowledge.

Critic of Wikipedia

Wikipedia is curated by volunteers (which is good, but there is misinformation, **problems with wikipedia’s model** is well known https://simple.wikipedia.org/wiki/Criticism_of_Wikipedia https://en.wikipedia.org/wiki/Criticism_of_Wikipedia)

The solution: Museum pages are curated by dedicated researchers and have their own system to curate and disseminate cultural data.

Starting point: use WikiData

https://www.wikidata.org/wiki/Wikidata:Main_Page to look for cultural data items, e.g.

⁶ <https://en.unesco.org/silkroad/about-silk-roads>

<https://www.wikidata.org/wiki/Q6101>

the first reference comes from

<https://www.wikidata.org/wiki/Q1993891>

[2](#) Bibliothèque nationale de France

Other Relevant References

The MET collaborate with Wikimedia

<https://wikimediafoundation.org/news/2018/04/19/wikimedia-the-met-shared-digital-vision/>

<https://www.youtube.com/watch?v=yJAicaCWAvY>

<http://histropedia.com/timeline/z7kb59m2lz/Universities> - timeline overlaps for history

Unesco is partner with Codata.org see datascience.codata.org

<http://dsr.nii.ac.jp/world-heritage.html>.
en

Off topic but Interesting

https://en.wikipedia.org/wiki/Macau_Scientific_and_Cultural_Centre in Lisbon