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GLAMhack 2021

online

16.–17. April 2021

#GLAMhack2021

Swiss Open Cultural Data Hackathon 2021

Final Report

Darienne Hunziker, September 2021

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1. Introduction

The 7th edition of the Swiss Open Cultural Data Hackathon, carried out as an online event, took place on April 16th & 17th 2021 and gathered people from all over the world. It was organized by the OpenGLAM Working Group, part of the Opendata.ch association, in collaboration with the ETHZ Library, among others partners. The event was kindly hosted by the ETHZ Library.

The Swiss Open Cultural Data Hackathon (GLAMhack) was accompanied by a rich side program. The first gathering was an information session on March 3rd, followed by an onboarding session on April 9th, a workshop night on April 13th, and a warm-up session on April 15th. The warm-up showcased four projects in the GLAM ecosystem and culminated in a spoken word performance by Lisa Christ and a workshop with the LODEPA¹ Group.



Photo of the live streaming studio at the ETH Library in Zurich, CC BY-SA 4.0.

¹ LODEPA stands for “Linked Open Data Ecosystem for the Performing Arts”

The side-program events covered various topics of the GLAM-osphere including the main foci of the GLAMHack21: linked open data, machine learning, human-computer-interaction and crowdsourcing.

All the events were, in accordance with the pandemic situation and BAG regulations, planned and held online.

The present report provides a summary of event results as well as some insights with regard to future hackathons. It is based on an assessment of project goals and the results of an internal evaluation meeting. A participants' survey will be carried through at a later point in time. An overview of the financial result is also provided.

2. Main Objectives of the GLAMHack 2021

As in the past editions of the GLAMhack, the main objectives of the hackathon were firstly, to bring a variety of stakeholder groups together and secondly, offer them new and exciting datasets from different data providers, which they then, thirdly, would apply to the development of concepts and software prototypes.

Finally, the project teams were given the opportunity to showcase their results to a broader public during the final presentations on the last GLAMHack day. The GLAMHack doesn't just offer teams the opportunity to present the projects they created during the hackathon, but also offers them the possibility to meet and connect with other people interested in GLAM subjects.

As each year, the GLAM Organisational Committee, designated a taskforce to reach out to Swiss heritage institutions and researchers in the Digital Humanities to open up their data and content and to spread the word about OpenGLAM².

After putting our efforts into raising awareness about OpenGLAM among museums and encouraging projects which engage an audience and make use of non-standard hardware in 2018 and 2019, the following specific objectives were set for the 2020 and 2021 editions of the hackathon:

- **Thematic focus on linked open data, machine learning, human-computer-interaction and crowdsourcing:** These topics are gaining in importance and are becoming more and more institutionalised in the international OpenGLAM community, which is why we have decided to highlight them.
- **Collaboration with institutions of higher education:** our goal was to engage more students and give them the opportunity to put their skills into practice by working on concrete projects. In the long-term, we hope that the collaboration with the educational institutions will sensitize them about OpenGLAM-related issues and foster the dialogue on how to integrate relevant topics in their curricula.

Finally, an additional goal was to increase the number of attendees in comparison to the 2019 edition. To this end, we have, since 2020, decided to return to the original 2-days hackathon format with a side program preceding the event.

² <http://openglam.org/principles/>

3. Achievement of Project Goals

The table in [appendix A](#) gives an overview of the goals that were set for this year's hackathon, the level of their achievement, and the achievements in the previous years for comparison. Please note that not all targets could be assessed yet, as dissemination activities take more time.

The documentation of individual hackathon projects and an overview of the media coverage can be found on the event website³.

In the following, we will shortly discuss the level of achievement of our goals in the context of the hackathon.

3.1 Opening up cultural data and content for reuse and making them available at a central location

Despite the efforts which have been made to contact potential data providers, only a few new datasets were made available through the [make.opendata.ch](#) website and [opendata.swiss](#).

166 open datasets / collections from 73 Swiss institutions⁴ have so far been made available through the [make.opendata.ch](#) website (compared to 157 open datasets / collections from 71 institutions in the previous year).

A specific effort was made to involve teams from the ETHZ Library. The Host of this year's GLAMHack also provided two new datasets and contributed an immense effort with their project: [WikiCommons metadata analysis tool](#).

Among the new data providers, we were happy to win the “Sammlung der Stiftung für Kunst, Kultur und Geschichte in Winterthur” and “Museum der Kulturen Basel”, and assist the latter with their project “The spatial evolvement of a Museums' collection”.

The continued experience of the past years shows that it is still vital for future editions, to continue the task of contacting and assisting potential data providers in order to push the openGLAM agenda.

³ <http://make.opendata.ch/wiki/event:2021-04>

⁴ These numbers do not include all the collections from the e-rara and e-manuscripta platforms, which were officially marked as Public Domain material in the course of 2017; these platforms have been counted just as one dataset.

3.2 Promoting the re-use of cultural data / content

After encountering a decrease in the number of participants and projects in the 2019 edition and a very promising increase of participants during the first online GLAMHack in 2020, we were happy to see the number of attendees rise again this year, receiving almost 200 applications from all around the globe and finally having around 70 active participants during the main hackathon. Participants were mainly from Switzerland, but we were happy to welcome participants from Canada, the USA, Sweden, Germany and other European countries. The teams worked on 17 projects, using new data/content prepared especially for the event, older datasets from the list of “Swiss Heritage Data” published on the make.opendata.ch website, open data from other sources in Switzerland and/or datasets provided by individual participants.

The diversity of the projects was very surprising. During the final presentation, teams showcased their projects ranging from chat-bots, visualisations, augmented reality, interactive maps and apps. Other teams worked on interconnecting linked open data from different sources on a common platform, on data modelling issues, text analysis for research purposes, on recreational websites intended for a broad audience or on using open data for educational purposes. One project was purely artistic while another project focused on detecting looted art - which demonstrated that GLAM Data can also push forward the agenda of social justice.

The data used in this year’s projects covers a variety of areas, ranging from press articles and topographic information, paintings and provenience descriptions of artworks to datasets containing information about theatre performances, Swiss heritage institutions or art exhibitions.



Overview of the challenges and ideas published before and during the hackathon. The green and yellow hexagons represent the projects which have been worked on during the GLAMhack while the others remained at the "challenge-state".

3.3 Fostering the exchange and cooperation among stakeholders from various backgrounds

With the online format of this year's hackathon, the fostering of exchange and cooperation among people from different backgrounds was first seen as a great challenge. Retrospectively, it seems that this goal has been highly achieved, not only through the hackathon itself but also thanks to the pre-event and side program of the GLAMhack.

3.3.1 Pre-event and side program

The information event in March was attended by approximately 50 persons. The majority of the attendees were employees of heritage institutions in Switzerland, mainly archives and libraries but also museums and research institutes. The workshop format of the pre-event was highly appreciated and facilitated a vivid exchange between the participants.




The onboarding event on April 9th was attended by around 40 persons, while the Workshop night on April 12th welcomed around 25 visitors.

The warm-up event with presentations, panel discussions and a spoken word performance was happy to welcome around 45 participants.

OpenGLAM Workshop Night

Tuesday, 13 April 2021, 17:00 - 19:00 CEST

Programme



17:00 - 17:30	Audio Segmentation of Opera Recordings (in continuation of the  Opera Forever project)	Eduard Klein (BFH), Lukas Stuber, Michelle Schmid (students at BFH)
17:30 - 19:00	 Workshop on base registers and controlled vocabularies in the cultural heritage field (follow-up of the  workshop of 10 Sept. 2020)	coordination: Thomas Hänsli; Stephanie Santschi, Wolfgang Schell, Florian Kräutli, Sarah Amsler (SARI - Swiss Art Research Infrastructure)

GLAMhack 2021 Pre-Event

Thursday, 15 April 2021, 15:00 - 19:00 CEST

A series of presentations and panels as well as a poetry slam session will put you in the right mood for the hackathon, which will officially start on the next day.

Programme

15:00 - 15:30	Project  Open Museum - Spanish Flu	Selina Stuber, Maja Skrkic
15:30 - 16:00	Project  Graph - Text reuse in rare books	Meda Hotea (ETH Library), Maarten Delbeke, Benoit Seguin (ETH Zürich, D-ARCH, History and Theory of Architecture)
16:00 - 16:30	Object Recognition / Entity Extraction on Wikimedia Commons	Yannick Burkhalter (Student at BFH)
16:30 - 17:00	Getting Started with IIIF	Annabelle Wiegart, Elias Kreyenbuehl (Zurich Central Library), Nobutake Kamiya (University of Zurich)
17:00 - 17:15	Break	
17:15 - 18:00	Panel: From Prototype to Product – How hackathon projects made their way into productive systems	Panelists: Mathias Bernhard; Lionel Walter (Basel University Library); Michael Gasser (ETH Library); Moderator: Beat Estermann (OpenGLAM CH)
18:00 - 18:15	Poetry Slam	

LODEPA Hackathon Workshop (Performing Arts Data)

Thursday, 15 April 2021, 19:00 - 20:30 CEST

Hackathon workshop for members of the LODEPA network who want to take an active part in the hackathon. "LODEPA" stands for Linked Open Data Ecosystem for the Performing Arts. Anybody interested in working with performing arts related data is welcome to join. We are offering this workshop on the eve of the hackathon in order to accommodate our colleagues from the American East coast who will not be able to attend the program on Saturday morning.

Hackathon Programme

Join us on  **Zoom** for the Final Project Presentation and Closing Ceremony.

Main hackathon from Friday morning to Saturday evening (*the detailed programme is subject to change; times are CEST / UTC +2*).

Friday, 16 April 2021

08:30 - 09:00	Check-in
09:00 - 09:20	Opening Session, official start of the Hackathon
09:20 - 09:40	Ice Breakers
09:45 - 11:00	Presentation of Challenges / Idea Pitching
11:00 - 12:00	Group Creation
	First Group Meeting / Noon Break
13:00 - 13:20	Fitness session
	Work in groups
17:30 - 18:30	Overview of GLAMhack Projects
18:40 - 19:00	Fitness session
	Work in groups ("night shift")

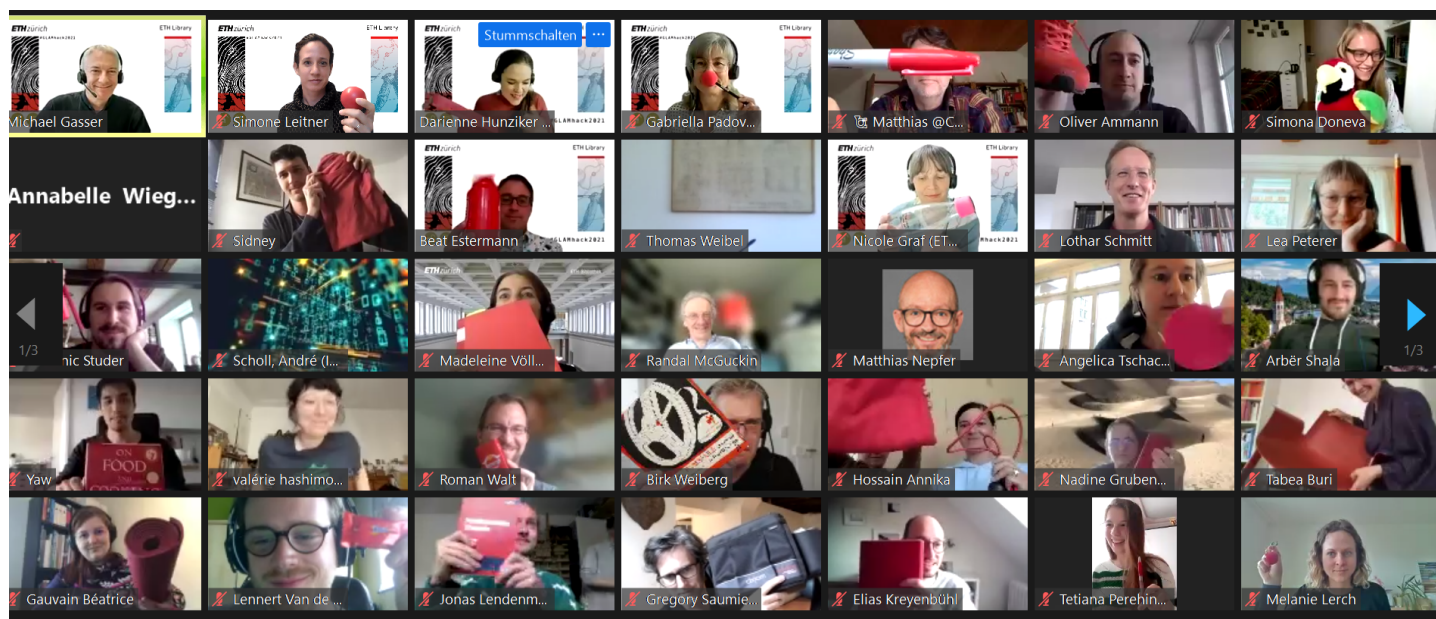
Saturday, 17 April 2021

08:30 - 08:50	Fitness session
09:15 - 09:30	Check-in
09:30 - 09:45	Welcome to Day 2
	Work in groups
12:00 - 12:20	Fitness session
12:20 - 13:00	Noon Break
	Work in groups
16:30 - 17:30	Final Project Presentations
17:30 - 17:45	Closing Session

All side-events were held online and were open to the general public, as long as they signed up to the event via Eventbrite. The different formats of the side-events (input-presentations, tutorials, workshops) enabled the sharing of knowledge, the exchange of experiences, the identification of common goals and challenges as well as the initiation of future collaborations. Some ideas were pursued as projects during the main hackathon.

3.3.2 Main hackathon

After a couple of low attendance events and an increase in 2020, we're happy to continue the trend of high participation. One reason for the increase might be due to the return to the 2-days format instead of the 3-days hackathon of 2018 and 2019. The online format might have discouraged some of our usual attendees who highly appreciate the social aspects of the live events. On the other hand, the virtual format enabled international participation to a degree which we hadn't experienced with the in-person hackathons⁵. The international character of the hackathon was very inspiring and gave the community a new drive.



Screenshot with GLAMhack participants during the “ice breaking session” on Friday morning, CC BY-SA 4.0.

Table 1 below shows that this year's hackathon was again very good at attracting female participants. Also, participants were well balanced between “data providers / content experts”, “software programrs”, and “researchers”, which usually make up the largest categories. Compared to earlier years, there was a stark increase in participation from the Wikipedia/Wikidata community. On the downside, the proportion of participants with a background in multimedia production has decreased compared to the previous year's edition, which had been hosted by FG Graubünden in cooperation with the Institute for Multimedia Production.

⁵ During the “ice-breaking session” on the first morning, the participants told everyone where they were from. We had people assisting from Canada, Croatia, USA, France, Germany, Liechtenstein, Norway, Sweden, Ukraine and England.

Table 1: Different categories of participants

Participant category	2017 edition (N = 94 of 98)	2018 edition (N = 66 of 69)	2019 edition (N = 33 of 33)	2020 edition (N = 68 of 68)	2021 edition (N = 95 of 98)
Female	37%	39%	12% ↓ **	44% ↑ **	43%
Male	63%	61%	88% ↑ **	56% ↓ **	57%
Data provider or content expert	32%	38%	24%	26%	34%
Software programr	34%	33%	52%	19% ↓ **	30%
Ideator	22%	21%	24%	—	—
Researcher	21%	27%	—	—	24%
Wikipedia or Wikidata editor	5%	3%	—	6%	17% ↑ **
Artist	1% ↓ **	5%	—	9%	—
Designer	3% ↓ **	8%	—	9%	—
Artist / Designer	—	—	—	—	6%
Multimedia producer (new)	—	—	—	19%	7% ↓ **
Hackathon organizer	11%	17%	24%	15% ↓ **	8%
Other	18%	11%	12%	37% ↑ *	16% ↓ **

Changes marked * are significant at the 0.10 level; those marked ** are significant at the 0.05 level.

3.4 Propagating the OpenGLAM principles within the Swiss heritage sector

In terms of the number of new datasets made available for the GLAMhack 2021, the targets in this area have not been achieved. The organizing committee has put a certain effort to reach out to potential data providers. Some of the contacted institutions have shown interest in our initiative but weren't ready this time. Thus, a continued effort will be necessary to turn further institutions into active data providers.

In terms of outreach within the heritage sector, the pre-event and side program of the hackathon have proven to be an effective way of propagating the OpenGLAM principles by sharing experiences and successful projects conducted by Swiss heritage and research institutions.

3.5 Promoting the public visibility of OpenGLAM

The impact of the hackathon in the media is always highly dependent on the visibility and the communication efforts of the host institution. Unfortunately, no major news outlet has reported on the GLAMhack 2021 however the following blogs and websites have written on this year's GLAMHack:

- GLAMhack 2021 – mehr als ein Event für Kulturdaten (blog article by Lothar Schmitt for the Association of Academic Librarians Switzerland, 26.05.2021)
- GLAMhack 2021 (Blogpost by Tammy Lee, 04.05.2021)
- A walk trough [sic] Zurich around 1910 (Blogpost by the City of Zurich)
- GLAMhack 2021 (Short Blogpost by the ZB-Lab)
- Open Cultural Data Hackathon 2021 (Blogpost by infoclio.ch)
- Der Häusersammler Friedrich Ruef-Hirt (Blogpost by Saro Pepe Fischer)
- GLAMhack 2021 – Creative and Fun Hacking (blog article by Andrea Allemann, 27.05.2021)

Furthermore, most events of the side program⁶ and the final presentations⁷ have been recorded and made available online, which we hope will increase the visibility of the projects and of OpenGLAM. The ETH Library also produced a Highlights video, which has been published on YouTube⁸.

⁶ <https://www.youtube.com/watch?v=TDLM7WHJXuM>

⁷ <https://www.youtube.com/watch?v=Yld9FkDyMac>

⁸ <https://www.youtube.com/watch?v=PyeBkEaSzul>

4. Evaluation of the online format



Screenshot with GLAMhack participants during the “ice breaking session” on Friday morning, CC BY-SA 4.0.

All in all, we are very satisfied with the virtual format of the hackathon. The ETHZ Library put a lot of technical effort into ensuring a frictionless unfolding of the event, which was highly appreciated by all participants.

One big challenge of the online format, or any online event for that matter, was to ensure that the social aspect and networking opportunities of the hackathon did not get lost. The whole hackathon took place through ZOOM, where all the teams had their assigned breakout room. Also, at all times during the hackathon the hosts of ETHZ Library and Opendata.ch were present, to visit the teams in their rooms, or simply “hang out” in the main room. We are confident that the good energy put through by the hosts, and the accessibility of the online tools gave the participants a sense of community and collectivity. The atmosphere during the event was inspiring and positive. Another challenge was the group formation on the first day. By encouraging the participants to publish their ideas beforehand, we tried to facilitate group formation. The publication of challenges in advance has been evaluated as a positive aspect by the organizing committee and will be pursued in future editions.

For the organizing committee, the adaptation to the online format resulted in a greater number of meetings. Not only did the solving of technical problems demand a lot of work, but the whole event needed to be coordinated with greater precision. The organising committee was dedicated to planning and practicing the online event to each detail, resulting in many meetings. However, the hard work came to fruition, since many participants commented later that they felt a sense of community and were energised.

Last but not least, the international character of the GLAMhack, which was enabled by the online format, was seen as very positive. The OpenGLAM Working Group hopes to achieve this level of internationality again in the future, but for the time being, the next GLAMhack will be planned as an “offline” event, at the SUPSI in Mendrisio. A possible combination of live and online event would need to be thought through carefully as this would be yet another, more complicated, type of event.

5. Potential for Improvement

Potential for improvement has been identified in several areas. The most notable points that were brought up during the internal evaluation meeting were the following:

- In the case of more than 15 projects, the final presentation format needs to be adjusted
- The communication material and outreach strategy vis-à-vis potential data providers need to be improved, in order for them to feel more involved.
- The documentation means of the hackathon projects need to be defined more clearly. This should be part of the general renewal of the Opendata.ch hackathon infrastructure, which is currently in progress.
- The host institution should be involved more closely in the definition of the scope and goals of the hackathon. These need to be communicated more clearly to the outside.

6. Outlook

The next GLAMhack will take place in the fall of 2022 at the SUPSI's new campus in Mendrisio. For 2023 we are already in talks with several possible hosts. The thematic focus will once more lie on linked open data, machine learning, human-computer-interaction and crowdsourcing. We will pursue our endeavors to collaborate closely with institutions of higher education in order to give students the opportunity to put their skills into practice. We will also cooperate to further develop the institutions' curricula.

The main hackathon will again last two days. The organization of an online side program shall be maintained, allowing participants to update each other on recent developments and to share skills and experiences. Furthermore, the "helpdesks" which gave participants the opportunity to ask questions to specialized mentors during the hackathon is a feature which we would like to have again in the future. The publication of challenges beforehand will also be encouraged.



Screenshot with GLAMhack participants during the "ice-breaking session" on Friday morning, CC BY-SA 4.0.

7. Project Resources

7.1 Financial resources

Table 2 below gives an overview of the financial resources of the project. It has been adapted to the online format in early April 2021:

Table 2: Overview of financial resources

Expenses	Budget	Effective Amounts
Food & Beverages	CHF3.000,00	CHF2.673,50
Food and drinks for organizing team during the event	CHF500,00	CHF270,50
Apéro package for participants residing in Switzerland	CHF2.500,00	CHF2.403,00
Project Coordination + Communication	CHF15.000,00	CHF13.500,00
opendata.ch	CHF5.600,00	CHF1.920,00
Contribution to the administrative costs of the opendata.ch association (10% of the overall budget)	CHF2.800,00	CHF1.920,00
Contribution to the renewal of the infrastructure (online platform) of the Swiss Open Cultural Hackathon (10% of the overall budget)	CHF2.800,00	
Varia / Incidentals	CHF4.000,00	CHF1091,5
Live Act Poetry Slam		CHF500,00
Sport-Einlagen (ASVZ)		CHF200,00
Geschenke Referenten / OK, Kleinausgaben		CHF292,80
Varia		CHF98,7
Total Expenses	CHF27.600,00	CHF19.185,00

The ETH Library, as the event's host, supported the event with 3666.3 CHF of in-kind sponsoring combined with countless working hours from their team. As well as 1250 CHF in cash.

The project was kindly supported by the following foundations:

- Hasler Stiftung (5000 CHF) deficit guarantee
- Wikimedia CH (6000 CHF)

The GLAMhack 2021 was roughly 7000 CHF cheaper than budgeted, mostly due to the cancellation of the contribution to the renewal of the infrastructure of the Swiss Open Cultural Hackathon. The project ran at a deficit of 3268.7 CHF which the Friends of OpenGLAM Network will cover. The financing of the hackathon has become more and more difficult over the past years. Due to internal changes in the Team the financing was left for too long, and in the future needs to be prioritised.

7.2 In-kind contributions

The organization of the event would not have been possible without the substantial in-kind contributions made by several individuals and organizations, most notably by contributing their volunteer and/or staff time:

- Jan Baumann (infoclio.ch)
- Gabriella Padovan (ETHZ Library)
- Nicole Graf (ETHZ Library)
- Michael Gasser (ETHZ Library)
- Beat Estermann (Opendata.ch / Bern University of Applied Sciences)
- Oleg Lavrovsky (opendata.ch)
- Lothar Schmitt (Zentralbibliothek Zürich)
- Dominik Sievi
- Lionel Walter (Basel University Library)
- Thomas Weibel (FHGR)
- Birk Weiberg
- Jonas Lendenmann

but also by allowing us to use their infrastructure and/or equipment:

- ETHZ Library
- Opendata.ch (online and hardware infrastructure, financial administration)

8. Final Remarks

This year's hackathon was a success in many respects: the high participation level despite the ongoing COVID crisis, the diversity among the participants, the high quality and variety of the projects, the good atmosphere throughout the event, the high quality and resonance of the side program as well as the technical implementation of the online format. Furthermore, we were very happy to involve new institutions, especially with the team from Canton Ticino. On the other hand, our outreach to potential data providers was not as successful as hoped for. From a financial point of view, this year's hackathon was not successful, as we encountered great difficulties to gather enough resources to cover our expenses.

We would like to thank all our sponsors and partners for supporting the event and are looking forward to continuing our cooperation in the future.

Our Sponsors

Host & Co-Organiser

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...

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Schweizerisches

Sozialarchiv

Appendix A: [Project Goals](#)