Welcome

Master of Science in Digital Humanities

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Social Networks
Culture or Technology?
Music
Culture or Technology?
Video Games
Culture or Technology?
Museums
Culture or Technology?
Project highlights
ScanVan

Thanks to the support of the Swiss National Fund NRP 75 Big Data, the ScanVan project has developed a new “spherical” camera and a dedicated vehicle to allow the easy digitisation of Swiss and European cities.
Decoding Beethoven's music style using data science

What makes Beethoven sound like Beethoven? Researchers from the Digital & Cognitive Musicology Lab have completed a first analysis of Beethoven's writing style, applying statistical techniques to unlock recurring patterns.
Why is Digital Humanities important?
Large talent gap in the CCSI

- Cultural and Creative Sectors and Industries (CCSI)

- Cultural and creative studies in European universities are mostly focused on the ‘creative part’

- Graduates are not always ready to enter the modern labour market as they lack cross-sectoral (entrepreneurial, digital and financial management) skills.

- These skills are needed for innovation in both emerging sub-sectors and very mature ones that undergo a profound digital transformation.

Source: Official Journal of the European Union 28.5.2021, Factsheet on the KIC on Cultural and Creative Sectors and Industries (CCSI)  
https://eit.europa.eu/sites/default/files/factsheet_on_the_kic_on_cultural_and_creative_sectors_and_industries_ccsi.pdf
The CCSI includes...

- Architecture (including film, television, software, video games, multimedia and recorded music)
- Audiovisual
- Design
- Festivals
- Music
- Libraries and Museums
- Books and Publishing (newspapers and magazines)
- Cultural Heritage (tangible and intangible)
- Radio and Visual Arts
- Performing Arts (including theatre and dance)
- Creativity-driven high-end industries and fashion
- Advertising
- Artistic Crafts
- Literature
- The Arts

Source: Official Journal of the European Union 28.5.2021, Factsheet on the KIC on Cultural and Creative Sectors and Industries (CCSI)
Our graduates meet these needs:
Industry, PhD, teaching
First DH Alumni event in 2023
What are they doing now?

“I really liked the Cultural Data Sculpting class by Prof. Kenderdine at the Laboratory of Experimental Museology, and now I’m doing my PhD there.”

— Giacomo Alletta, PhD Student – EPFL

“I work in a mapping company. I analyze the data and look into how people actually behave in organizations, what are their roles and how they distribute work amongst each other.”

— Robin Szemczuk, Data Scientist – Peered

“I’m mainly doing work related to front end development in this Lausanne based startup.”

— Yuanhe Lin, Web developer – guarantors SA

“I build machine learning models to create value for the company in the logistic process.”

— Hakim Invernizzi, Data Scientist – Digital Galaxus

“I am doing my PhD at the Digital Visual Studies Lab researching computer vision methods and links to AI, to art and art history.”

— Ludovica Schaurt, PhD Student – University of Zurich / Max Planck Institute
I am an Information Management and Data Science Officer at the Federation of the Red Cross and Red Crescent Societies. The Red Cross and Red Crescent Movement is recognised for responding to disasters around the globe, and their Information Management teams are the ones in charge of providing data insights to operational teams in shape of maps, dashboards, analysis and platforms.

In my current role, I support with data science projects aimed to improve the effectiveness of our operations. This goes from technical developments to strategic alliances, from processing big data and proposing machine learning models, passing through the design and management of platforms for early warning, to university-industry partnership management.

Being a data scientist at the Red Cross and Red Crescent Movement has been an honour, and although it was a quite unique opportunity at the time, I think now opportunities are only growing, searching for profiles that besides being technically capable are informed and interested on the social implications of their solutions - and I think digital humanities engineers are in a good starting position to offer that.

I am the Head of Data in a music industry start-up in Paris (it’s called Groover).

I am running a team of Data Scientists and Engineers to create Machine Learning applications such as a recommendation system matching artists and music industry professionals or an audio tagging tool to help artists understand the genres and trends they are operating in.

My day-to-day consists of staying up to date with ML research through paper presentations and prototypes, setting and maintaining production infrastructure for our current models, creating analytics for everyone in the company and provide external data to take strategic decisions with respect to the company's competition.
What is the EPFL DH Master?
DH Master curriculum

- Computer science bloc: 22 ECTS
- Digital Humanities bloc: 21 ECTS
- Options Group: 41 ECTS
- Master Thesis Project: 30 ECTS
- SHS: 6 ECTS
DH Master curriculum

Allows for maximum flexibility

- Unique offer of core, project-based courses
- Students can choose optional courses out of a large list of classes from many other sections
- Students can choose to do a semester project in the options group
- Credits can be taken outside of the study plan, for example classes at UNIL (maximum 15 ECTS).
- The mandatory internship can be done:
  - Short 8-week summer internship
  - One semester internship (4 to 6 months)
  - Master thesis project done in industry or in an institution
# Core courses and faculty

<table>
<thead>
<tr>
<th>Computer Science Block</th>
<th>Digital Humanities Block</th>
<th>New optional DH classes</th>
</tr>
</thead>
</table>
| **Daniel Gatica-Perez**  
Computational Social Media | **Jérôme Baudry**  
History and the Digital | **David Javet**  
Game Design & Prototyping |
| **Frédéric Kaplan**  
Foundations of Digital Humanities | **Nicolas Henchoz**  
Design research for digital innovation | **Johan Rochel**  
Ethics and law of AI |
| **Mathieu Salzmann**  
Machine Learning for DH | **Sarah Kenderdine**  
Cultural Data Sculpting | |
| **Bob West**  
Applied Data Analysis | **Martin Rohrmeier**  
Digital Musicology | |
Internships can be in many different industries in Switzerland and abroad:

- Media & cultural institutions
- Industry
- Humanitarian organizations

See what our students did during their internships – 3 minute video reports

https://go.epfl.ch/dhinternships
Internships - examples

Music Industry - Deezer
Research project in natural language processing
Internships - examples

Cultural institution – Institut d’Histoire de l’Art, Paris
Creation of a machine readable dataset of Paris’ city directories
Internships - examples

Film industry – Largo a.i (start-up in EPFL’s quartier de l’innovation)
Project in artificial intelligence working on neural network architecture
Examples in Media & cultural institutions
- RTS – Radio Television Suisse, Lausanne
- Art Recognition AG (evaluation of art authenticity), Zurich
- Peter Lang Group AG (publishing company), Bern
- Largo Films SA (startup in the film industry), Lausanne
- Agence Mediafaune, (Digital Communication), France
- Fondazione Giorgio Cini, Italy
- Centre Allemand d'Histoire de l'Art, France
- BnF - Bibliothèque Nationale de France, France
- Harvard Library, USA
- INHA - Institut national d’histoire de l’art, France
- Dunhuang Academy, China
- Archives de l’Etat du Valais, Sion
- CERN, Geneva
- EBU – European Broadcasting Union, Geneva
- Bibliotheca Hertziana – Max Planck Institute for Art History, Italy

Examples in Industry
- DataGalaxy (NLP & UX), France
- Yang Technology AG (Oppo), Zurich
- Tencent AI Lab, China
- Visium Technologies (ML & AI), Lausanne
- Allegro (on-line e-commerce platform), Poland
- Alibaba Cloud, China
- ABB, Baden
- AXA insurance, Lausanne
- Philip Morris International, Lausanne
- Oracle, Zurich

Examples in Financial institutions
- Pictet Asset Management (private banking), Geneva
- BNS – Banque Nationale Suisse, Zurich
- MET AG (Trading Company), Zug

Examples in Humanitarian organizations
- Int. Federation Red Cross (IFRC), Geneva
Research - Our students publish papers

Recent examples

<table>
<thead>
<tr>
<th>Student name</th>
<th>Graduation year</th>
<th>Publication type (journal, conference, workshop, book chapter)</th>
<th>Publication title</th>
<th>Author list</th>
<th>Publication details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haeeun Kim</td>
<td>2022</td>
<td>Conference</td>
<td>Referencing in YouTube Knowledge Communication Videos</td>
<td>H. Kim and D. Gatica-Perez</td>
<td>ACM International Conference on Interactive Media Experiences (IMX), Nantes, Jun. 2023</td>
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</tbody>
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What is the path of EPFL students in DH?
Some examples

Bachelor
• Computer Science

Internship
• Institut national d'histoire de l'art, France

Domain of work today
• Archiving and records management consulting services
Some examples

Bachelor
• Life Sciences

Internship
• BnF - Bibliothèque Nationale de France

Domain of work today
• PhD student at EPFL
Some examples

Bachelor
• Technology Management

Internship
• International Federation of Red Cross and Red Crescent Societies (IFRC), Switzerland

Domain of work today
• IFRC - Data Analyst in the humanitarian sector
Some examples

Bachelor
• Computer Science + Digital Media

Internship
• Fondazione Giorgio Cini, Italy

Domain of work today
• PhD student outside EPFL
Some examples

Bachelor
• Economics major & informatics minor

Internship
• BNS – Banque Nationale de Suisse

Domain of work today
• BNS – Banque Nationale de Suisse
A new Minor in Digital Humanities, Media & Society will be offered as of Fall 2024

Follow us on Instagram (@epfldh) or on our website for details.
DH for Bachelor Students

- SHS classes
- Semester projects in DH Labs
- Summer in the Lab
- DH events
- Dhelta (DH student association)

https://go.epfl.ch/dhpourbachelors
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Q&A
Thank you and keep in touch!