

# YUMENG HOU

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**BIO:** Yumeng Hou is a researcher and practitioner at the forefront of digital humanities and computational archives. Hou has research, teaching, and industrial experience in computational humanities, digital museology, data visualization, cultural analytics, intangible heritage, HCI, and cloud-based solutions, with a track record of realizing technical products, commercial projects, installations, and publications.

## EDUCATION

<b>Doctor of Philosophy in Digital Humanities, EPFL</b> Research keywords: computational curation, computational archives, motion semantics, knowledge representation, intangible heritage; <i>Supervisor:</i> Prof. Sarah Kenderdine	Defense in July 2024
<b>Master of Science in Computer Science, EPFL</b> <i>Thesis:</i> “Visualizing Personal Nutrition Intake and Emotions”, <i>Supervisor:</i> Dr. Pearl Pu	2015 – 2017
<b>Bachelor of Engineering in Digital Media Technology, Zhejiang University</b> <i>Thesis:</i> “Visualizing Topic Evolutions in Wikipedia”, <i>Supervisor:</i> Prof. Wei Chen	2010 – 2014
<b>Exchange Student in Computer and Systems Sciences, Stockholm University</b>	2013 – 2014

## PROFESSIONAL EXPERIENCE

<b>Creative Tech Lead, _box Interaction</b> [ <a href="#">website</a> ], Hangzhou, China <i>Responsibilities:</i> Led technical innovations, leveraging data science and media techs to enhance interactive exhibitions and museums, immersive learning spaces, and more.	11.2019 – 10.2020
<b>Digital Strategist</b> (part-time), NewStyle Media Group [ <a href="#">website</a> ], Beijing/Hangzhou, China <i>Responsibilities:</i> Provided advisory support on digital transformation strategy and Office Automation System (OA) architecture for the board of directors.	12.2019 – 09.2020
<b>Technical Product Manager – Media Service PaaS/SaaS</b> , Alibaba Cloud, Hangzhou, China <i>Responsibilities:</i> Product Owner for the Real-time Communication (RTC) and Live-streaming SDK cloud media services; Project Manager and Scrum Master for the R&D of RTC and Live-streaming SDK (liaison with 20+ technical experts); business analytics and reporting.	10.2017 – 10.2019
<b>Digital Consumer Analyst EMEA</b> (intern), Procter & Gamble, Geneva, Switzerland <i>Responsibilities:</i> Designed and prototyped the automated process to visually report business KPIs, which got implemented at scale; Modeled and prototyped the CRM algorithms for automated email campaigns in Europe; Organized knowledge sharing and team events.	08.2016 – 01.2017
<b>Lead Software Engineer &amp; APP Designer</b> (part-time), HIBACHI, Lausanne, Switzerland <i>Responsibilities:</i> Co-launched Hibachi project, an aesthetically designed connected lunchbox [ <a href="#">website</a> ]; Built product from scratch till business validation; Pitched among investors.	10.2015 – 10.2018

## RESEARCH EXPERIENCE

<b>Doctoral Researcher in Digital Humanities</b> <i>Laboratory for Experimental Museology (eM+), DHI, EPFL</i>	10.2020 – present
<b>Visiting Scholar in Visualization and Digital Archives</b> <i>Visualization Research Centre (VRC), Hong Kong Baptist University</i>	July – Dec.2022
<b>Research Assistant in Data Visualization</b> <i>Visual Analytics and Intelligence Group, Zhejiang University</i>	2013 – 2015

## TEACHING EXPERIENCE

<b>Lecturer, Teaching Assistant &amp; Course designer.</b> DH-404 Cultural Data Sculpting, EPFL	2021 – 2024
<b>Guest Lecturer.</b> Horizon MetaTool, Delft University of Technology	Spring 2024
<b>Guest Lecturer.</b> Digital Art History 2022, University of Basel	Spring 2022
<b>Supervision.</b> Master’s project on knowledge interface design, EPFL	Fall 2023/24
<b>Supervision.</b> Master’s project on knowledge graph-based cultural analytics, EPFL	Spring 2021/22
<b>Supervision.</b> Master’s project on deep learning for multimodal archives, EPFL	Spring 2020/21
<b>Mentor.</b> Applied project in CS-433 Machine Learning, EPFL	Fall 2020/21

## ACADEMIC SERVICES

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**Peer Reviewer:** *Heritage Science, International Journal of Heritage Studies, Multimedia Tools and Applications, Digital Scholarship in the Humanities, Journal of Open Humanities Data, Digital Humanities 2023, and ACM MOCO'24* 2022 – present

**PhD Student Representative, Doctoral School Committee Member** 2021 – 2023  
*EPFL's Doctoral School of Digital Humanities (EDDH)*

### Conference/Seminar Organization

- Workshop on “Beyond Search: Opening Up Audiovisual Content for Humanities Studies” Sep 25-26 2023
- Seminar on “Human Factors in Digital Humanities” Dec 2-3 2021

### Academic Memberships

- EuropeanaTech Communities & Research Communities, Europeana Network Association (2022 – present)
- European Association for Digital Humanities (2023 – present)
- Association for Computing Machinery (2021 – present)
- AI4LAM - Artificial Intelligence for Libraries, Archives & Museums (2021 – present)
- UNIL-EPFL dhCenter (2020 – present)

## GRANTS & AWARDS

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EPFL Doc.Mobility grant (2022), a continuation of SNFS's instrument funded by Swissuniversities and EPFL [\[link\]](#)

EPFL-UNIL's CROSS – Collaborative Research on Science and Society grant (2021) [\[link\]](#)

Europeana Network Association member grant for attending EuropeanaTech 2023

Finalist for the best paper award (Paul Fortier Prize) at Digital Humanities Conference 2023

## Top 5 REPRESENTATIVE PUBLICATIONS

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\* See a comprehensive portfolio of my publications, projects, lectures and talks at [\[My Research\]](#).

**Hou, Y.\* & Kenderdine, S.** (2024) “Ontology-based Knowledge Representation for Traditional Martial Arts”. *Digital Scholarship in the Humanities* (SSCI|AHCI). doi: [10.1093/llc/fgae005](#)

**Hou, Y.\***, Kenderdine S., et al. (2022). “Digitizing Intangible Cultural Heritage Embodied: state of the art”, in *Journal on Computing and Cultural Heritage*. [https://doi.org/10.1145/3494837](#)

**Hou, Y.\***, Seydou, F., & Kenderdine S. (2023). “Unlocking a multimodal archive of Southern Chinese martial arts through embodied cues”. *Journal of Documentation* (SSCI). doi: [10.1108/JD-01-2022-0027](#)

**Hou, Y.\* & Yuan, L.** (2023, in press) “Building a knowledge graph of Chinese kung fu masters from heterogeneous bilingual data”. *Journal of Open Humanities Data*. [https://doi.org/10.5334/johd.136](#)

Xia, J., **Hou, Y.**, Chen, Y. V., Qian, Z. C., Ebert, D. S., & Chen, W.\* (2017). “Visualizing rank time series of Wikipedia top-viewed pages”. *IEEE computer graphics and applications*, 37(2), 42-53. [https://doi.org/10.1109/MCG.2017.21](#)

## EXHIBITION & INSTALLATION & CREATIVE WORKS

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*Museum of Poetry Cultural Experience @Keqiao. Co-curator.* A digital, playful, and interactive museum. [\[demo\]](#)

*ImmerScience. Tech lead.* An immersive learning space created for Daning International School, Shanghai. [\[demo\]](#)

*Natural Origins of The Internet. Artist.* Data Art Installation. Museum of Inspiration, Hangzhou. [\[repo\]](#)

*Mirrorj. Designer.* A design for the augmented era, transmitting exhibition experience to a 2D interface. [\[blog\]](#)

*Aqua. Designer.* Virtual aquarium motivating knowledge sharing. Médecins Sans Frontières (MSF), Geneva. [\[repo\]](#)

*MOOC Learning Flow. Designer & Developer.* A visualization of learners' path with outcome prediction. [\[repo\]](#)

*SPARK. Designer.* An interactive stress management APP designed during the HCI course, EPFL. [\[demo\]](#)

## KNOWLEDGE & SKILLS

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**Language:** Mandarin (native), English (proficient), French (intermediate, B1/B2), Cantonese (elementary).

**Knowledge Fields:** Cultural Heritage, Digital Archives, Semantic Web, Machine Learning, User Experience (UX), Data Visualization, Visual Analytics, VR/AR/XR, Digital/Virtual Museum, Motion Capture, Cloud Solution, HCI

**Programming:** Python, JavaScript (D3.js, three.js, p5.js), SQL/Cypher, R, Java, processing, HTML/CSS, C++, etc.

**Tools:** UE4, Unity, Axure, Media Processing (DaVinci, Photoshop, Audition, AI, etc), Neo4j, Knime, MS Office, etc.

**Soft Skills:** Product Design and Management, Communication, Data-driven Mindset, Agile, Team Spirit, Empathy

**Others:** Traditional (Chinese/European) Martial Arts, Archery, Musical Keyboard, Jazz Drumming, Yoga