

YUMENG HOU

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BIO: Yumeng Hou is a PhD candidate in digital humanities and computational archives at EPFL, Switzerland. She earned her MSc in Computer Science from EPFL in 2017 and a BEng in Digital Media Technology from Zhejiang University in 2014. Yumeng 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 realization of technical products and commercial projects, installations, and publications.

EDUCATION

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

INDUSTRY EXPERIENCE

Creative Tech Lead, _box Interaction [website], Hangzhou, China <i>Responsibilities:</i> Leading creative technologies, leveraging data visualisation, media techs, and cloud solutions to enhance interactivity and engagement for exhibitions and museums.	11.2019 – 10.2020
Digital Strategist (part-time), NewStyle Media Group [website], Beijing/Hangzhou, China <i>Responsibilities:</i> Providing strategic advisory and solution architecture on digital transformation, office automation, and data-driven business intelligence.	12.2019 – 09.2020
Technical Product Manager – Media Service PaaS/SaaS, Alibaba Cloud, Hangzhou, China <i>Responsibilities:</i> Product owner for Real-time Communication (RTC) and Live-streaming cloud media services; R&D project manager and Scrum Master for the RTC and Live-streaming SDKs (liaison with 20+ technical experts); business analytics and market research.	10.2017 – 10.2019
Digital Consumer Analyst EMEA (intern), Procter & Gamble, Geneva, Switzerland <i>Responsibilities:</i> Visualization and automation of business reporting pipelines; Prototyping automatic CRM (customer relationship management) email campaigns in Europe; organizing team events.	08.2016 – 01.2017
Lead Software Engineer & APP Designer (part-time), HIBACHI, Lausanne, Switzerland <i>Responsibilities:</i> Co-launched Hibachi project, an aesthetically designed connected lunchbox [website]; Built product from scratch till business validation; Pitched among investors.	10.2015 – 10.2018

RESEARCH EXPERIENCE

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

TEACHING EXPERIENCE

Lecturer, Teaching Assistant. DH-404 Cultural Data Sculpting 2021/2022/2023, EPFL	2021 – 2023
Guest Lecturer. Digital Art History 2022, University of Basel	Spring 2022
Supervision. Master’s project on knowledge interface design, EPFL	Fall 2023
Supervision. Master’s project on knowledge graph-based cultural analytics, EPFL	Fall 2021
Supervision. Master’s project on deep learning for multimodal archives, EPFL	Spring 2021
Assistant Lecturer, Teaching Assistant. Cross-Media Data Visualization (Zhejiang University)	2014 – 2015

ACADEMIC SERVICES

Peer Reviewer: *Digital Scholarship in the Humanities, Cogent Social Sciences, International Journal of Heritage Studies, Heritage Science, Journal of Human-Computer Interaction, Multimedia Tools and Applications, International Journal of Open Humanities Data, Digital Humanities Conference 2023, 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)

GRANTS & AWARDS

EPFL Doc.Mobility grant (2022), a continuation of SNFS's instrument funded by Swiss universities 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

* 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](https://doi.org/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](https://doi.org/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

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. [\[blog\]](#)

AquaA. 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

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: Chinese Martial Arts, Archery, Musical Keyboard, Jazz Drumming, Yoga