Curriculum Vitae

Yuqi Chen

Department of History

Peking University

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Research Interests

Digital Humanities, AI for Humanities, Quantitative History & Archaeology, Social Network Analysis, Text Mining, Cultural Evolution, Early China Studies

Education

2022— Visiting Scholar

2023 Institution: Institute for Quantitative Social Science

Harvard University

2019— Degree: PhD in History 2015 (expected) Institution: Peking University

Dissertation: A Social Network Analysis of Noble Families in Early China

(1600 BCE - 256 BCE)

2017— Degree: Master in History
 2019 Institution: Peking University
 2012— Degree: Bachelor in History

2012— **Degree:** Bachelor in History 2017 **Institution:** Peking University

GPA: 3.67 of 4.00 (Ranking: 3/56)

Affiliation

2023— Position: Associate (Part-time)

Present Institution: Department of Human Evolutionary Biology

Harvard University

Work Experience

2022— **Position:** Game Design Intern

2022 Institution: Tencent

Summary: Integrate history into games

Professional Service

- Reviewer for Nature Human Behaviour (Springer Nature Publishing)
- Reviewer for Humanities and Social Sciences Communications (Springer Nature Publishing)
- Reviewer for Digital Scholarship in the Humanities (Oxford University Press)

Media Coverage

• The work of historical-psychological text analysis using AI technology has been covered by DeepTech & MIT Technology Review China.

Publications

Peer-Reviewed Papers

- R1 Chen, Y., Li, S., Li, Y., & Atari, M. (2024). Surveying the Dead Minds: Historical-Psychological Text Analysis with Contextualized Construct Representation (CCR) for Classical Chinese. In Y. Al-Onaizan, M. Bansal, & Y.-N. Chen (Eds.), Proceedings of the 2024 Conference on Empirical Methods in Natural Language Processing (pp. 2597–2615). Association for Computational Linguistics. https://aclanthology.org/2024.emnlp-main.151
- R2 Chen, Y., Li, Y., Zhou, K. Z., Fu, X., Liu, L., Bao, S., Sui, D., & Zhang, L. (2024). Global Public Sentiment on Decentralized Finance: A Spatiotemporal Analysis of Geo-tagged Tweets from 150 Countries. *CCF Annual Conference on Computational Economics* 2024. https://arxiv.org/abs/2409.00843
- R3 Chen, Y., Shang, W., & Chen, S. (2024). Pure Conversation with AI: Building Generative Agents for Reenacting Debates in History. *The Annual Conference of the Alliance of Digital Humanities Organizations 2024*. https://doi.org/10.5281/zenodo.13761079
- R4 Chen, Y. & Wang, L. (2022). The Great Transformation of the Clan System in Early China: A Social Network Analysis of Clan-sign Inscriptions from 1300 BC to 900 BC. In The Book of Abstracts of Digital Humanities 2022 (pp. 440–444). https://dh2022.dhii.asia/dh2022bookofabsts.pdf#page=440
- R5 Hong, Z., & Chen, Y. (2024). Persuading the Emperors: A Quantitative Historical Analysis of Political Rhetoric in Traditional China. *Humanities and Social Sciences Communications*, 11(1), 840. https://doi.org/10.1057/s41599-024-03164-5
- R6 Shang, W., Chen, Y., Dubnicek, R., Cordell, R., & Downie, J. S. (2024). Interplay Between Materiality and Content in Book History: Evidence from 16th–19th Century Chinese and English Books. The Annual Conference of the Alliance of Digital Humanities Organizations 2024. https://doi.org/10.5281/zenodo.13761079
- R7 Wei, T., & Chen, Y. (2023a). A Methodology for Building Domain Ontology of Cultural Heritage. *Digital Scholarship in the Humanities*. https://doi.org/10.1093/llc/fqad045
- R8 Wei, T., & Chen, Y. (2023b). A Ding Ontology of Chinese Bronze. *Journal on Computing and Cultural Heritage*, 16(4). https://doi.org/10.1145/3609484
- R9 Shang, W., Chen, S., **Chen, Y.**, & Diesner, J. (2023). Structural Characteristics in Historical Networks Reveal Changes in Political Culture: An Example From Northern Song China (960–1127 C.E.). In *Proceedings of the Computational Humanities Research Conference 2023* (pp. 263–273). http://ceur-ws.org/Vol-3558/paper2567.pdf

Working Papers

- W1 Chen, Y., Shang, W., Wang, H., Zhang, S., & Bol, P. K. (2024). Geocoding the Past World: Unearthing Coordinates of Early China from Texts Using Generative AI. *International Journal of Geographical Information Science*. (under review)
- W2 Chen, Y., Slingerland, E., Hong, Z., Fu, X., Wang, H., Schulz, J., Bol, P., Henrich, J., & Atari, M. (2024). Geography, Climate, Kinship and the Dynamics of Psychological Change in China over Two Millennia (in progress)
- W3 Dillion, D., LIU, Y., **Chen, Y.**, Watts, D., Joseph, Zhao, C., Baral, S., Buckner, W., Atari, M., Kteily, N., & Jackson, J. C. (2024). Prejudice Tied to State Centralization in Historical Societies. https://doi.org/10.31234/osf.io/zxuth

Selected Presentations

- P1 Chen, Y. Historical Minds and Artificial Intelligence: How AI Helps Rediscover Ancient Minds. Frontiers in Chinese Studies Series, Bucknell University. Sep 18, 2024.
- P2 Chen, Y. Surveying the Dead Minds: Historical Text Analysis Unveiling Psychological Dynamics Within Chinese Culture Across Two Millennia. School of Chinese, The University of Hong Kong. Jun 3, 2024.
- P3 Chen, Y. Geocoding the Past World: Unearthing Coordinates of Early China from Texts Using Large Language Models. Chinese Historical Databases: Sources, Methods, Prospects, The Hong Kong University of Science and Technology. January 11, 2024.
- P4 Chen, Y. "Pure Conversation" with AI: Building Generative Agents for Humanities Studies. The 4th Tsinghua International Forum on Digital Humanities, The Hong Kong University of Science and Technology and Tsinghua University. December 8, 2023.
- P5 Chen, Y. Frome Question to Methodology: Digital Humanities and Humanities Computing. Breaking Boundaries in the Age of Technology: Defining New Liberal Arts and Digital Humanities, The 8th Weiming Roundtable, Peking University. November 5, 2023.
- P6 Chen, Y. Scholar Presentations: China Biographical Database Project (CBDB). Institute for Quantitative Social Science, Harvard University. October 7, 2023.
- P7 Wei, T., Chen, Y., & Wang, L. Ontology-Driven Digital Humanities Research and Application. School of Information Management, Nanjing University. November 10, 2021.

Software Developments

2024	Program:	HIS-GEO
	Role:	Sole Developer

Link: https://github.com/yukiyuqichen/HIS-GEO

Description: A library to extract historical toponyms from texts, geocode

and visualize the results on maps.

2023 Program: OCR Toolkit

Role: Sole Developer

Link: https://github.com/yukiyuqichen/OCR-Toolkit

Description: A toolkit for Optical Character Recognition (OCR) with

graphical user interface, including image preprocessing and

text recognition. Works out of the box.

2023 Program: CHAR

Role: Primary Contributor

Link: https://github.com/yukiyuqichen/CHAR

Description: An open-source Python library for converting Chinese char-

acter variants to standard simplified or traditional characters.

Research Experience

October 2022— Present **Project:** Historical Psychology

Institution: Harvard University, University of Massachusetts Amherst

PI: Joseph Henrich, Mohammad Atari

Summary:

• The leading author of a paper that studies the spatial variation and temporal evolution of moral values in historical China by NLP (natural language processing) methods

- Constructed a corpus containing over 10,000 historical books, and conducted data cleaning and preprocessing, including automatic punctuation, to all texts using deep learning models
- Trained deep learning models specific to psychology for measuring moral values in classical Chinese texts
- Conducted spatial analysis and time series analysis

January 2023— June 2024 **Project:** Explain Atheism

Institution: Queen's University Belfast, University of Macau

Funded by: John Templeton Foundation PI: Jonathan Lanman, Ze Hong

Summary:

• Constructed an open-access dataset of Chinese newspapers and periodicals related to religious skepticism during the late Qing and early Republic era

- Applied OCR techniques for digitization of newspapers and periodicals, and NLP techniques for analysis and annotation of classical Chinese texts
- Organized a coder team, trained the coders to be skilled in manual text annotation, and implemented efficient coding processes and quality control measures

October 2022— October 2023 **Project:** China Biographical Database Project

Institution: Harvard University

PI: Peter K. Bol

Summary:

- Extracted biographical data from 20,000 piecies of bronze inscriptions
- Developed softwares and tools of OCR (text recognition), Chinese variant characters converting, and geocoding for the team

December 2020— March 2021 **Project:** Chinese Archaeology Database Project

Institution: The University of Hong Kong

PI: Zhiwu Chen

Summary:

• Collected 3,658 entries of archaeological data in Jiangxi Province

 \bullet Cleaned and analyzed the archaeological sites data from 2000 to 771 BCE

July 2020— January 2021 **Project:** Knowledge Graph of Confucian Classics

Institution: Peking University

Funded by: National Natural Science Foundation of China

PI: Jun Wang

Summary:

• Built an ontology model of Confucian Classics bibliography

• Constructd a thesaurus of Confucian Classics

January 2014— June 2016 **Project:** Patterns in the Evolution of Ancient History

Institution: Peking University

Funded by: Peking University President's Fund

Advisor: Jin He

Summary:

• Analyzed the evolution of lengends in Early China by textual research

Fieldwork Experience

June 2018— July 2018 Project: Excavation of the Liujiawa Site, Shaanxi Province

Institution: Shaanxi Academy of Archaeology

PI: Jianrong Chong

Summary:

• Excavated a small-sized tomb in East Zon I dating to the early Spring-and-Autumn Period

• Cataloged the unearthed funerary objects from a medium-sized tomb (M7) in East Zon I

Teaching Experience

October 2023 Course: Computing in the Humanities

Institution: University of Illinois Urbana-Champaign

Role: Guest Lecturer

Contributions: Delivering guest lectures to undergraduate students on the

China Biographical Database and prospography

March 2023 Workshop: Introduction to Optical Character Recognition (OCR)

Host: China Biographical Database Project, Harvard University

Role: Workshop Instructor

Contributions: Providing guidance to visiting scholars on how to use OCR

Tools, including image preprocessing, deploying local models,

and invoking APIs

September 2021— Course:

Course: Research on Paleography and Ancient History

January 2022 Institution: Peking University

Role: Teaching Assistant

Contributions: Assisting with course administration and teaching

September 2020— Course: General History of China (Ancient Part)

January 2021 Institution: Peking University
Role: Teaching Assistant

Contributions: Assisting with course administration, teaching, and grading

exams

February 2019— Course: Archaeological Discoveries and Historical Research

July 2019 Institution: Peking University Role: Teaching Assistant

Contributions: Assisting with course administration

Selected Honors and Awards

Academic

• Chinese Government Scholarship, 2021

• Merit Student of Peking University, 2015

• CHUNG Tien-Seen Scholarship, 2015

• Wu-Si Scholarship, 2014

• Lee Wai Wing Scholarship, 2013

Literary

• The 1st "Qixiang Award" Science Fiction Short and Medium Story Writing Competition, Silver Award, 2023

- The 2nd "Rapid Eye Movement" Poetry Prize, The Chinese University of Hong Kong, Shenzhen, Finallist, 2020
- The 2nd iReader Writing Competition, First Prize for Short Story, 2018

Certificates

July 2022	Program: Institution:	Digital Humanities at Oxford Summer School Oxford University
May 2022	Program: Institution:	Mathematics for Machine Learning Imperial College London
April 2022	Program: Institution:	Introduction to Programming with Python and Java University of Pennsylvania
July 2021	Program: Institution:	The 8th Summer School for Quantitative History Shanghai Jiao Tong University
May 2020	Program: Institution:	The 1st Workshop on Digital Humanities Peking University