An example of literature review. Applying artificial intelligence to cultural tourism: opportunities, threats and managerial implications.

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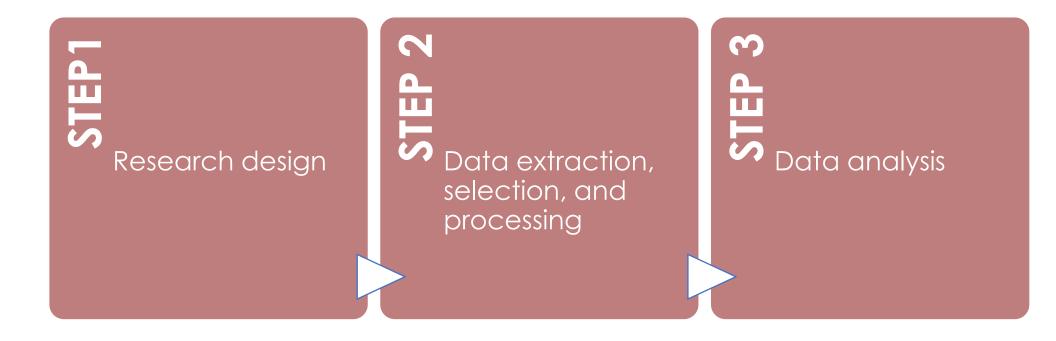


Research aim and methodology



Which are **opportunities**, **threats** and **implications** related to the application of AI to cultural tourism?





Step 1 Research design



- Defining the field of investigation
- Developing search strings
- Identifying search tools
- Defining inclusion/exclusion criteria

Keywords	Artificial Intelligence, tourism, cultural heritage, cultural tourism							
Research strings	TITLE-ABS-KEY ("artificial intelligence" OR ai) AND TITLE-ABS-KEY (tourism OR "tourism sector*") AND TITLE-ABS-KEY ("cultural heritage" OR "culture" OR "cultural sector*")							
Database	Scopus							
Language	English							
Time span	2000-2023							
Source type	 Journal article Book chapter Conference paper 							

Step 1 Research design



Q Search Sources SciVal 7

Welcome to a more intuitive and efficient search experience. See what is new

Advanced query (



(TITLE-ABS-KEY ("artificial intelligence" OR ai) AND TITLE-ABS-KEY (tourism OR "tourism sector*") AND TITLE-ABS-KEY ("cultural heritage" OR "culture" OR "cultural sector*"))

Show less



☐ Save search



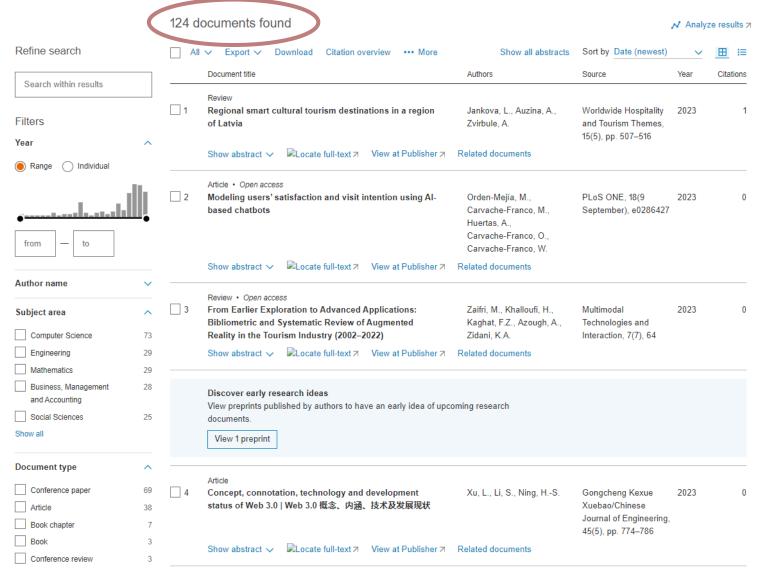
Edit in advanced search



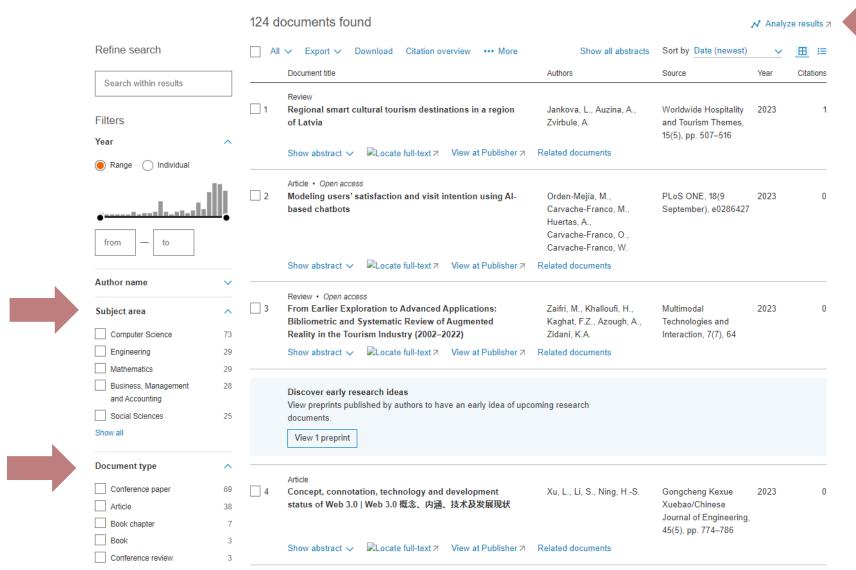
- Initial search
- Documents screening and selection

2.1 Search on Scopus database according to the search criterion on "titles, abstracts or keywords"	112 documents
2.2 Analysis of each article (title, abstract, authors and indexed keywords), screening	32 documents

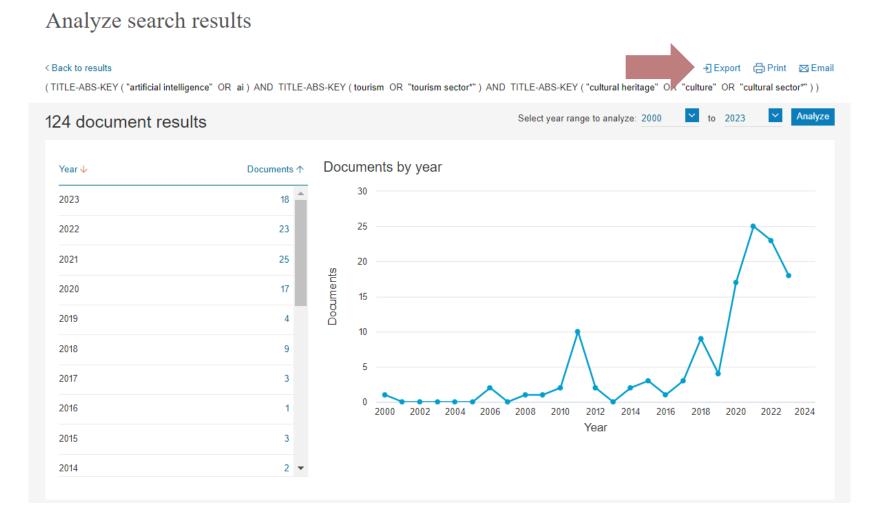
and selection



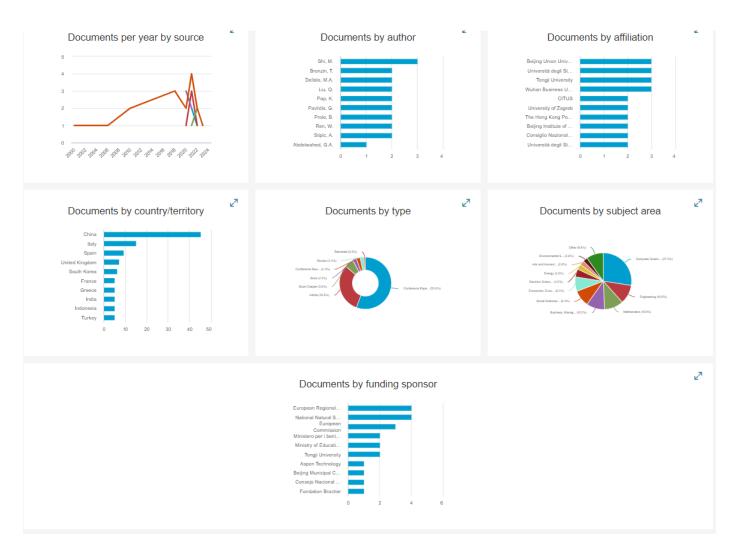
2.1 Search on Scopus database according to the search criterion on "titles, abstracts or keywords"



2.2
Analysis of each article
(title, abstract, authors
and indexed keywords),
screening and selection



Analysis of each article (title, abstract, authors and indexed keywords), screening and selection



2.2
Analysis of each article
(title, abstract, authors
and indexed keywords),
screening and selection



I 118/210975-MS	Yea Title 2022 Private 5G Practice in Oil and Gas Industry	▼ Authors	Author full names utairi N.B.; Aseery A.A.; Al Buraik Alanazi, Abdullah Mohammed (57988111700); Alr			Cite Link	Author Kegword		communication sus	■ Document Ty ■ tems: Conference paper	
080/10963758.2022.2056044	2022 Hospitality and Tourism Higher Education in the Post-COVII						www.s Although we have entered the no curriculum theory; fut		on management by b	Article	Final
09/IEMECON56962,2023,10092286	2023 Chatbot Enabled Smart Tourism Service for Indian Cities: Ar						www.s Tourism is one of the significan Chatbots; Informatio				
194/isprs-archives-XLII-2-W5-335-2017	2017 Digital heritage" theory and innovative practice	He Y.; Ma Y.H.; Zha					www.s "Digital heritage", as defined in t Cultural heritage; Digi		rsion; Artificial intel		
08/WHATT-10-2022-0116	2023 The role of artificial intelligence and blockchain technologies	s in sustaina Kashem M.A.; Shar	msuddoha M.; Nasir T.; Chowdh Kashem, Mohammad Abul (57225793798); Shar	isuddoha, N World	WID 15	1 https://	www.s Purpose: This paper reviews the AI; blockchain; MEN.	ł;		Article	Final
007/978-3-031-05463-1 6	2022 Interaction Design in Residence Mode of Health and Tourist	m Liu Y.: Wang R.: Zha	ao T. Liu. Yanlin (57203118381): Wang, Ruichao (57776)	786001: Zha Lectui	re N 13325 LN	ICS 0 https://	www.s Under the background of the he. Artificial intelligence:	C Electronic commerce: I	lealth care: Human	comp Conference paper	Final
Nr	Title	Notes/reasons of exclusion	Abstract	Authors	Year	Source title	DOI	Author Keywords	Index Keywords	Document Type	Publication Stage
Hospitality and Tourism H	igher Education in the Post-COVID Era: Is It Time to		Alaboration become and the control of the control o	V 1 . T ibi	2022	lavanal af llaa	40.4000/40002750.2022.2050044			A-Ai-I-	Cinal
2 Chatbot Enabled Smart Tourism Service for Indian Cities: An Al Approach			Tourism is one of the significant factors that determines the g	ov Anand S.; A	2023	11th Internatio	10.1109/IEMECON56962.2023.10092286	Chatbots; Informat	Information d	Conference paper	Final
3 Digital heritage" theory and innovative practice			"Digital heritage", as defined in this paper, is the integration of	f c He Y.; Ma Y.	2017	International A	10.5194/isprs-archives-XLII-2-W5-335-2017	Cultural heritage; D	Analog to digi	Conference paper	Final
The role of artificial intelligence and blockchain technologies in sustainable 4 tourism in the Middle East			Purpose: This paper reviews the role of two significant smart t	acl Kashem M	2023	Worldwide Ho	10.1108/WHATT-10-2022-0116	Al: blockchain: MEN		Article	Final
	nd its lagoon •••: Cultural heritage protection policies		The paper focuses on cultural heritage protection policies for				10.5194/isprs-archives-XLIV-M-1-2020-559-20		1		Final
	Advanced Applications: Bibliometric and Systematic		The paper rocuses on curtain the rage protection policies for		2020	THE	20:313 1/13p13 01cm1c3 x2:11 M 1 2020 333 2	- Cartara Herriage III		comercines paper	
6 Review of Augmented Reality in the Tourism Industry (2002–2022)		augmented reality and	Augmented reality has emerged as a transformative technolog	, Zaifri M.; K	2023	Multimodal Te	10.3390/mti7070064	AR design; augment		Review	Final
7 The role of recommenders in cultural heritage		Reccomenders	Recommenders are, typically, systems that exploit knowledge			CEUR Worksho		Cultural heritage; N			Final
	telligence technology in smart tourism		With the advent of the information technology era, artificial in	te Li J.; Di F.	2021	ACM Internation	10.1145/3516529.3516539	Artificial intelligen	Economic and	Conference paper	Final
Exploration of Social Benefits for Tourism Performing Arts Industrialization in Culture–Tourism Integration Based on Deep Learning and Artificial Intelligence 9 Technology		Al come strumento per	As a product of the tourism performing arts industry in culture	–t Zhang R.	2021	Frontiers in Ps	10.3389/fpsyg.2021.592925	BP neural network;		Article	Final
Disaster information prov 10 application	ision for international tourists using an interpreter		With its new tourism-focus, Japan has been encouraging an in	cri Suzuki T	2020	WIT Transactio	10.2495/ST200091	Amusement park: D	i	Article	Final
11 A Vietnamese Festival Preservation Application			Preservation and development of intangible cultural heritage				10.1007/978-981-16-7618-5 39	Application; BERT; (Conference paper	Final
Harnessing artificial intelligence technology and social media data to support				1			<u>-</u>				
12 Cultural Ecosystem Service assessments		Al come strumento di a	Cultural Ecosystem Services (CESs), such as aesthetic and recr	ea Egarter Vigi	2021	People and Na	10.1002/pan3.10199	crowdsourced data	1	Article	Final
Research on Digital Platform Technology of Intangible Cultural Heritage in 13 Beijing Section of Great Wall Cultural Belt		digital platform and AI	This study aims to propose that a digital platform should be b	il Zhu L.; Pang	2022	Proceedings - :	10.1109/CoST57098.2022.00093	digital platform tec	 Walls (structi	Conference paper	Final
14 Robots in Tourism and Hospitality: The Perception of Future Professionals			This research is aimed at analyzing the perception of future to	u Palrão T.; R	2023	Human Behavi	10.1155/2023/7172152			Article	Final
		neural network									
Establishing world cultural heritage sites resource allocation system and		algorithm e AI come									
management system based on neural network algorithm—a case on hailongtun		sistema per									
15 tusi site 19/MDM55031.2022.00069	2022 EnterCY: A Virtual and Augmented Reality Tourism Platform	allocazione risorse n for Cyprus Constantinou S.; P	A World Heritage Site must be of outstanding universal value a amboris A.; Alexandrou R.; Kror Constantinou, Soteris (57226698252); Pamboris	n(Ren W.; Liu Andreas (Proce	2019 ed 2022-Jur	International J ne 0 https://	10.23940/ijpe.19.02.p19.547558 www.s This demo paper presents Enter Al Based Recommer	Allocating; Creative d Location; Tourism; Virti	Computation	Article recom Conference paper	Final Final
5/3495018.3495381	2021 Application of Artificial Intelligence Technology in Tourism E	English Tran Zhai L.	Zhai, Lian (57614512500)	ACM	Inti	0 https://	www.s Tourism, especially foreign tour Artificial Intelligence;	N Character recognition; I	Personnel training;	Artifici Conference paper	Final
919/MIPRO55190.2022.9803734	2022 The Proposed Method of Measuring How Mixed Reality Ca						www.s The rapid development of techn artifacts; artificial inte		avioral research; M		
389/fpsyg.2020.611383 389/fpsyg.2022.944250	2021 A Meaning-Aware Cultural Tourism Intelligent Navigation Sy		Meng, Lei (56161767000); Liu, Yuan (3526260550) I-Ansi A.: Ruu H.B.: Ariza-Monte Loureiro. Sandra Maria Correia (27467492100); A				www.s To improve the personalized se affective computing; www.s Tourism scholars have been de cultural heritage looti			Article Article	Final Final
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Step 3 Data analysis



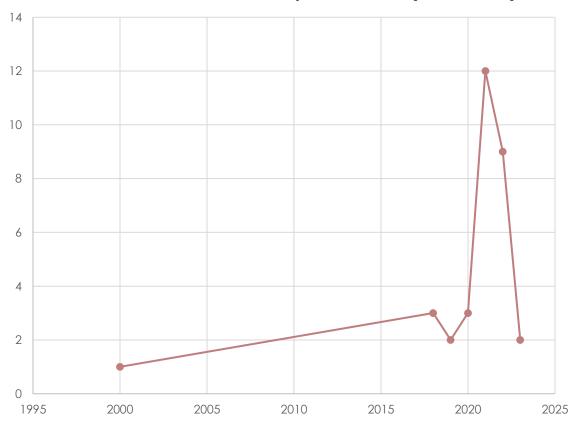
Definition of the coding frame: 6 dimensions of analysis

- Lines of research
- Al application
- Al-related technologies
- Research questions/main issues
- Opportunities/threats
- Emerging solutions

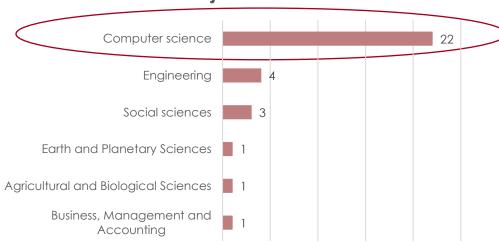
Content analysis of each document, coding and clustering

Preliminary results

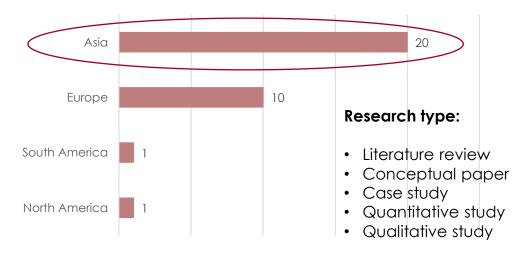
Evolution of number of publications (2000-2023)



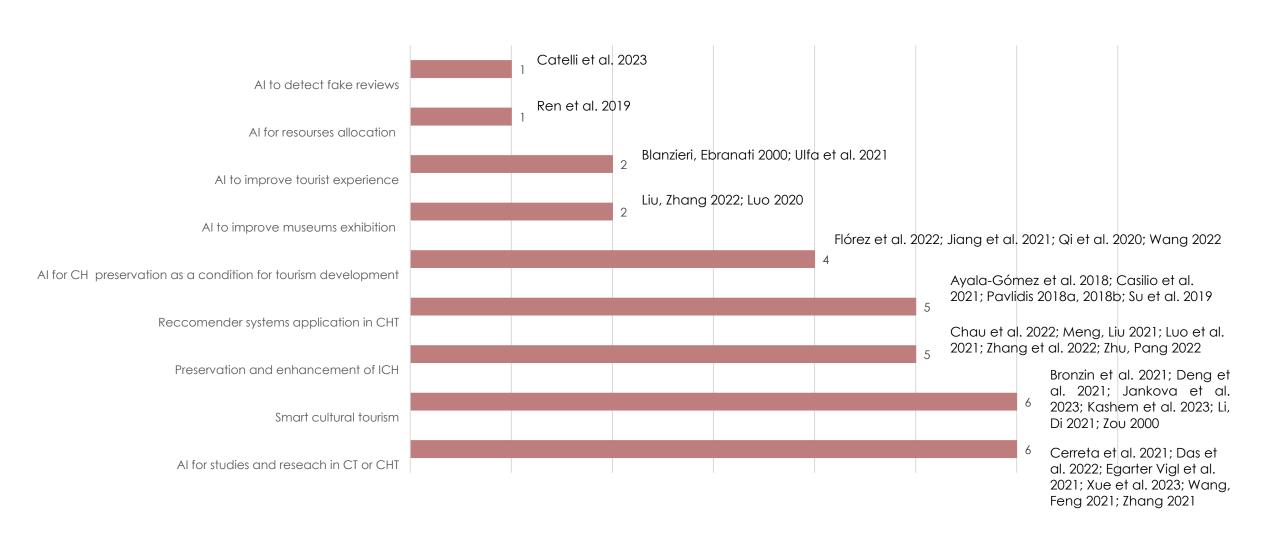
Subject area



Authorship affiliation by continent



Lines of research (in progress)



Preliminary insights

- A still new research field (part. 2018-2023) and mainly investigated by computer science and engineering studies.
- Low interest from business, management and accounting studies: difficulties in identifying marketing and policy
 implications for cultural tourism.
- Prevalence of articles published in conference proceedings.
- Predominance of experimental studies mainly focused on the development of specific algorithms for the application
 of AI to cultural tourism.
- Blurred boundaries between **AI and other new technologies** (augmented/virtual/mixed reality, ICT, IoT, etc.): AI is in danger of becoming an "umbrella term" including technologies and tools that do not fall within the sphere of AI.
- Focus on the user experience: the user-centric approach as an interesting perspective for marketing research.
- Promising field of research for **museum studies**: significant presence of studies focused on potentials of AI to improve and personalise the visitor experience in museums (e.g., recommender systems for museum tours).
- Lack of investigation of Al-related threats and risks.
- Large number of Asian studies (both authorship and geographical area considered by case studies).
- Lack of insights into the main issues and emerging solutions (research is still in progress).

Research limitations and future development

- Extend the study to other databases (WoS, EBSCO, Google Scholar, etc.) and integrate of the number of documents included in the review.
- Deepen the content analysis (specifically on main issues and emerging solutions) also by using bibliographic software (e.g., Vos Viewer).
- Review projects and initiatives focused on AI application to cultural tourism.

Thank you for your attention!

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