

Investigating AI literacy education in the Caribbean

Caribbean
Educational
Research Journal

Paul Walcott and Adrian Als

*Department of Computer Science, Mathematics and Physics, Faculty of Science
and Technology, The University of the West Indies, Cave Hill Campus,*

Bridgetown, Barbados, and

Gail Rolle-Greenidge

*School of Science, Computing and Artificial Intelligence, The University
of the West Indies, Five Islands Campus, Five Islands Village, Antigua and Barbuda*

17

Received 23 March 2025
Revised 21 June 2025
Accepted 8 September 2025

Abstract

Purpose – This paper investigates artificial intelligence (AI) literacy education in Jamaica, Trinidad and Tobago, Barbados and Antigua to gain an understanding of the perceived benefits and challenges of AI use, the degree of implementation of AI literacy education and citizens' attitudes toward the use of AI in their daily lives.

Design/methodology/approach – A secondary data analysis research design was employed in this study. This design requires the creation of research questions, the search for secondary data and the analysis of that data.

Findings – The perceived benefits of AI use included revenue growth and increased productivity while the perceived challenges were ethical issues and job displacement. Adult learners received the most AI training and some citizens had negative attitudes toward AI.

Research limitations/implications – Secondary data were used in this research. Therefore, the questions that could be asked were restricted. The advantage of this approach, however, is that the research was completed faster and at a lower cost.

Practical implications – An age-appropriate Caribbean AI literacy curriculum for all education levels is required, and cooperation among Caribbean governments is needed to formulate AI implementation plans and policies. This will take time and money.

Social implications – Citizens' degrees of understanding of AI are important since effective AI use could lead to enhanced productivity, innovation and revenue, thereby improving citizens' quality of life.

Originality/value – There is a dearth of research on AI literacy education in the Caribbean. This paper, therefore, informs educators, governments and other stakeholders about the state of AI literacy, which will potentially help them to formulate strategic plans necessary to prepare for Caribbean-wide AI literacy education.

Keywords AI, AI literacy education, AI education, AI policies, Caribbean

Paper type Research article

Introduction

Since the release of ChatGPT (Generative Pre-trained Transformer) in November 2022, the use of artificial intelligence (AI) has increased exponentially. This technology has shaped and influenced the livelihood, production and communication modes of our society (Hill-Yardin, Hutchinson, Robin, & Spencer Sarah, 2023) and has sparked a global discussion on AI literacy for all. In small island developing states, such as those in the Caribbean, AI has the potential to transform education, social welfare and how society works and thrives; however, concerns have been raised regarding the challenges associated with the use of AI, including its biases and unethical use. To tackle these challenges, it is critical that users be informed about AI concepts and its ethical use while having informed attitudes towards AI. This can be accomplished through AI literacy education for all.

The notion of AI is anchored in computer science, biology, philosophy, mathematics, metaphysics and psychology. Consequently, the quest for a universal consensus on an overarching definition accepted by each discipline is still ongoing. In this work, AI is broadly defined as “the capability of a machine or computer system to simulate human intelligence processes such as learning, logical reasoning, and problem-solving” (Morandín-Ahuerma, 2022, p. 1947). As a result, tools such as Grammarly are considered AI. Moreover, Generative AI (GAI), such as ChatGPT, is a special class of AI capable of learning from data and creating new content, for example, text, video and multimedia based on user prompts.



Caribbean Educational Research Journal
Vol. 10 No. 1, 2026
pp. 17-32
© Emerald Publishing Limited
2978-6177
DOI 10.1108/CERJ-04-2026-0011

Long and Magerko (2020, p. 2) defined AI literacy as the “set of competencies that enables individuals to critically evaluate AI technologies; communicate and collaborate effectively with AI and use AI as a tool online, at home and in the workplace.” These competencies are organised in three broad categories, namely, design concepts which are associated with the creators; the evaluation of AI tools to determine the most appropriate tool to use and the ethics of AI applications, such as privacy, employment, misinformation, bias, diversity and accountability. Sheikh, Prins, and Schrijvers (2023) maintained that AI literacy includes digital, scientific and data literacy competencies. This view is also supported by Stolpe and Hallström (2024), who included design, media and computer literacy competencies in AI literacy to ensure that “both the understanding of technology itself and its embeddedness in a particular cultural, societal, and political context” (Stolpe & Hallström, 2024, p. 2) are recognised. Consequently, AI literacy must include competencies needed to use, manage, assess and understand technology. AI literacy must also include a socio-ethical technical perspective. Laupichler, Aster, Schirch, and Raupach (2022) noted that as AI plays an increasing role in everyday life, it is important that the AI skills of non-experts in society also be improved so that everyone can interact with this technology. These authors further posited that there “are relatively few experiments and very little fundamental research in the area of AI literacy” (Laupichler *et al.*, 2022, p. 13).

In the Caribbean, the use of AI is in a nascent phase, therefore, governments, educators and society at large are now trying to grapple with the potential benefits and consequences of its use, both positive and negative (Walcott, 2024a; Walcott & Walcott, 2024). In fact, a 2019 AI Readiness Ranking of Jamaica, Trinidad and Tobago, Barbados and Antigua and Barbuda (the four countries under study in the present research) highlighted how ill-prepared the region was for AI, given that their rankings were Trinidad and Tobago (73rd), Jamaica (87th), Barbados (135th) and Antigua and Barbuda (144th) (Montoya & Rivas, 2019). Furthermore, AI policies appear to be lacking in the Caribbean, which can result in the unethical use of AI (Walcott, 2024a; Madden, McKenzie, & Daley, 2025). As a result, there is an urgent need to promote AI literacy in the region (Walcott, 2024a; Madden *et al.*, 2025) to ensure that all stakeholders are prepared to use AI in an ethical manner. Greater effort is required to ensure that AI tools are used properly to maintain academic integrity, reduce instances of breaches in data privacy and security and reduce unemployment due to job losses by creating new types of jobs (Walcott & Walcott, 2024; Madden *et al.*, 2025). Furthermore, the limited research available for the Caribbean in this area needs to be extended to better inform the development and use of AI in the region.

The purpose of this research is to investigate the perceptions of stakeholders, such as citizens, educators, governments, businesses and other non-governmental institutions, towards AI. These stakeholders were drawn from four Caribbean countries, namely Jamaica, Trinidad and Tobago, Barbados and Antigua. More specifically, the perceived benefits and challenges of AI use, the degree of implementation of AI literacy education and attitudes toward AI utilisation in their daily lives are studied. This research utilised a secondary data analysis research design.

Consequently, the research questions explored in this research were:

- (1) What are the perceived benefits and challenges of AI use in Jamaica, Trinidad and Tobago, Barbados and Antigua?
- (2) To what degree is AI literacy education implemented in Jamaica, Trinidad and Tobago, Barbados and Antigua?
- (3) What are the attitudes of Caribbean stakeholders from Jamaica, Trinidad and Tobago, Barbados and Antigua toward the integration of AI into their daily lives?

The aim of the study is to establish a baseline for AI literacy education in the Caribbean. This is essential given the ubiquity of AI and the desire for the region to harness it for economic growth. Jamaica (which has the largest population of the four countries), Trinidad

and Tobago, Barbados and Antigua (which has the smallest population) were selected based on the size of their populations, their gross domestic products (<http://www.caribbean-atlas.com/en/the-caribbean-in-brief/the-caribbean-islands/>) and their information and communication technologies strategies (<https://edc.gov.bz/wp-content/uploads/2016/11/Caricom-ICT-for-Development-Strategy.pdf>). In addition, these countries all house tertiary education institutions such as The University of the West Indies (www.uwi.edu), a regional university.

There is a dearth of research on AI literacy in the Caribbean; therefore, this study represents an essential step towards understanding the landscape prior to implementing plans and policies to prepare Caribbean citizens for the AI revolution. Failing to complete research such as this will increase the digital divide and lead to further inequity in the region.

The remainder of the paper reviews the benefits and challenges of AI, AI literacy education conceptual frameworks and AI literacy education implementation efforts and then presents the research methodology, findings, discussion, recommendations and the conclusion of the study.

AI literacy education

There has been a rapid response to the increasing need for AI literacy education worldwide, with a variety of AI literacy education conceptual frameworks being developed and employed. These include a framework by [Kong and Yang \(2023\)](#), which was used to train primary school children, [Shin \(2021\)](#), which was employed for K-12 education, and [Kong and Zhang \(2021\)](#), which was designed to train all citizens. This review begins by discussing the benefits and challenges of AI and is followed by an evaluation of AI literacy education frameworks. The purpose of this evaluation is to identify a suitable framework that could be used to analyse AI literacy education in the Caribbean. Finally, studies reporting the outcomes of AI literacy education efforts will be reported.

Benefits and challenges of AI

The transformation of societies in the wake of GAI systems has created a plethora of benefits and challenges. The benefits drive innovation and result in increased efficiencies, thereby fuelling growth (both economic and otherwise) across diverse sectors. These sectors include healthcare ([Topol, 2019](#); [Ali et al., 2023](#)), manufacturing ([Zhuo, Larbi, & Addo, 2021](#); [Javaid, Haleem, Singh, & Suman, 2022](#)) and business and education ([Luckin, Holmes, Griffiths, & Forcier, 2016](#)).

The challenges associated with the use of AI, however, must also be addressed to ensure its ethical and equitable deployment. A major concern is the reported biases present in AI algorithms, which can perpetuate stereotypes and inequalities if not properly managed ([O'Neil, 2016](#); [Noble, 2018](#); [Srinivasan & Chander, 2021](#)). There are also privacy and data security concerns given that vast amounts of personal data are being collected and processed to train these AI systems ([Dilmaghani et al., 2019](#)).

These benefits and challenges have also been reported in the limited scholarly research available for the Caribbean. For example, [Walcott \(2024a\)](#) identified challenges of AI use in education in Barbados such as bias, teacher fear, the high cost of training and cheating. Similarly, [Walcott and Walcott \(2024\)](#) posited that several challenges existed for AI teaching and learning in St. Lucia. Similar challenges such as bias, fear, cost and cheating were identified; however, additional challenges included the reduction of creativity and basic skills of individuals and the devaluing of academic certifications. In addition, [Madden et al. \(2025\)](#) reported several benefits and challenges of AI use noted by Jamaican academic faculty. Challenges included faculties' limited knowledge of the ChatGPT tool, students' overreliance on ChatGPT and the lack of AI policies. Benefits such as the use of ChatGPT to brainstorm ideas and helping lecturers to prepare lectures and conduct research were also posited.

With AI-based societies set to take centre stage, AI will potentially replace many societal roles (Shin, 2021). Accordingly, developed countries, such as the United States of America and China, have already begun to transform their education systems (Shin, 2021) to balance the positives and negatives of these AI technologies (Green & Clayton, 2021). Given that AI literacy education provides the cognitive, developmental and ethical competencies needed to nurture the potential of citizens, AI literacy education conceptual frameworks are needed to ensure that AI and related concepts are effectively taught.

AI literacy education conceptual frameworks

Shin (2021) designed an AI literacy education framework to support AI education for K-12. The study highlighted a structured approach to decision-making in AI thinking, focusing on processes such as discussion, idea generation, demonstration and validation. These cognitive skills are deemed to be essential for problem-solving in AI and serve as a foundation for AI education. This framework, though suitable for fostering AI development competencies, did not specifically address the ethical implications therein. Alternatively, Kong and Yang (2023) focused on enhancing AI literacy in primary school students by employing an attention-engagement-error-reflection (AEER) pedagogical design. Using this framework, each student's attention was captured using learning robots, collaborative learning was used for engagement and students then learnt through trial and error, before reflecting on their learning. Despite the authors reporting promising results with improved AI conceptual understanding, learning-to-learn skills and motivation, the study was limited to a small sample and a single primary school class. Therefore, there was no evidence that this approach would work when scaled.

The approach adopted by Olari and Romeike (2021) was to educate the educators. They reviewed existing educational frameworks and proposed a holistic approach that incorporated both AI and data literacy competencies. Their primary findings suggested that the design of future AI or data literacy frameworks should foster key data management competencies, such as acquisition, cleansing, modelling, implementation, optimisation, analysis, visualisation, evaluation, sharing, erasing and archiving. This framework focused on the technical aspects of AI development and therefore did not benefit general AI users.

Kandlhofer, Steinbauer, Hirschmugl-Gaisch, and Huber (2016) presented a more comprehensive AI education framework than Kong and Yang (2023) with pilot studies being conducted at the kindergarten, middle school, high school and university levels. The content taught at each level included graphs, data structures, sorting and searching algorithms and problem-solving concepts, delivered in an age-appropriate manner. Higher-level skills were built on the prior knowledge of students and progressively included more complex content. Preliminary results suggested that this approach is effective; however, it is designed for students rather than the general public.

Faruqe, Watkins, and Medsker (2021) noted that a holistic approach to AI literacy is needed to move from a conceptual framework to a multi-level competency model with associated competency assessments. Their proposed strategy anticipates future developments in AI systems and addresses a broad range of stakeholders, including consumers, the general public and policymakers; co-workers and users of AI products; collaborators and AI implementers and AI creators. While the authors did not propose any specific framework, they noted that the AI literacy knowledge and skills required for each stakeholder category were different and would evolve over time as the AI research community learns more about AI literacy.

The difficulty of planning for the emergence of yet unknown future AI roles necessitates that any existing framework, for example, Long and Magerko (2020), would also need to evolve. Consequently, Kong and Zhang (2021) proposed a three-dimensional AI literacy framework consisting of cognitive, affective and sociocultural dimensions. The cognitive dimension aimed to equip individuals with both the knowledge and practical skills needed to navigate, evaluate and utilise AI technologies effectively in various contexts. The affective

dimension ensured that AI literacy would not only impart technical knowledge but also foster a positive and empowering emotional experience, enabling individuals to confidently engage with AI and contribute meaningfully to their communities. Additionally, the sociocultural dimension ensured that AI literacy included a deep understanding of ethical standards and their application, promoting the responsible and fair use of AI in advancing global development goals.

Many of the reviewed frameworks focused on educating students and teachers in an academic setting; however, AI literacy education in the Caribbean needs to be broader in its approach since it must include the general public. While [Faruqe et al. \(2021\)](#) built on the work of [Long and Magerko \(2020\)](#) to address a more diverse group of stakeholders, their framework lacked the multidimensionality suggested by [Kong and Zhang \(2021\)](#). Additionally, the cognitive aspects of the work by [Faruqe et al. \(2021\)](#) can be effectively integrated into the framework recommended by [Kong and Zhang \(2021\)](#), making it more suitable for the Caribbean context.

AI literacy education implementation efforts

[Laupichler et al. \(2022\)](#) reviewed 30 studies on teaching AI literacy in higher and adult education (adult learners are non-traditional, mature students with full-time jobs and dependents ([Brown, Spaulding, Montes, & Durham, 2021](#)) in countries such as the USA, Canada, South Korea, China, UK and Australia. They found that research in this area is still in its infancy and highlighted the need for further refinement of concepts and materials.

Similarly, [Southworth et al. \(2023\)](#) stated that there were only a few university-level resources that represented a comprehensive approach to incorporating AI into the curriculum. These authors noted that the Institute for Human-Centered Artificial Intelligence at Stanford University and the focus at Northwestern University facilitated the education of students and professionals on AI theory, practice and impact. However, these efforts were limited to the computer science and engineering departments and were therefore not comprehensive. This contrasts with the work done at the University of Florida (UF) ([Southworth et al., 2023](#)). UF has significantly invested in AI development and engagement across its campus. They assembled “world-class faculty well-versed in AI concepts and assembled a technical staff of AI specialists to assist faculty and students in using the latest AI supercomputer” ([Southworth et al., 2023](#), p. 4). The goal of the investment in foundational AI resources (with support from NVIDIA) and curriculum development was to infuse AI across all disciplines, empowering students to be at the forefront of technological advancements ([Southworth et al., 2023](#)).

Conclusion

The primary purpose of this review was to identify an AI literacy education framework that could be used to evaluate AI literacy education in the Caribbean. It was determined that the multidimensional framework suggested by [Kong and Zhang \(2021\)](#), comprising cognitive, affective and sociocultural dimensions, would be appropriate given its ability to evolve over time and its applicability to the general public.

Methodology

A secondary data analysis research design was used to investigate AI literacy education in Jamaica, Trinidad and Tobago, Barbados and Antigua. When using this research design, the data used in the research are collected for some other purpose by another person ([Johnston, 2014](#)). Qualitative data were assembled from secondary sources using the following three-step process ([Johnston, 2014](#); [Walcott, 2023](#)):

- (1) The creation of research questions;

- (2) The search for secondary data and
- (3) The analysis of the secondary data.

The three-dimensional AI literacy conceptual framework proposed by Kong and Zhang (2021) (described in the review of the literature) was adopted in the present study. This framework comprises a sociocultural domain (encouraging the ethical use of AI), a cognitive domain (focusing on the understanding of AI concepts) and an affective domain (examining reactions to the widespread use of AI in the daily lives of citizens). This framework was used to evaluate AI literacy education efforts in the Caribbean. Three research questions were formulated, one for each of the three dimensions:

- RQ1. What are the perceived benefits and challenges of AI use in Jamaica, Trinidad and Tobago, Barbados and Antigua (sociocultural domain)?
- RQ2. To what degree is AI literacy education implemented in Jamaica, Trinidad and Tobago, Barbados and Antigua (cognitive domain)?
- RQ3. What are the attitudes of Caribbean stakeholders from Jamaica, Trinidad and Tobago, Barbados and Antigua toward the integration of AI into their daily lives (affective domain)?

Searches were conducted in Google, Google Scholar, IEEE Xplore, ACM Digital Library and ProQuest using the search terms as follows: “benefits and challenges of AI in Jamaica” (repeated for each country); “what are the attitudes of Jamaican citizens towards AI use” (repeated for each country); “AI literacy education in the Caribbean”, “AI education in Jamaica” (repeated for each country) and “artificial intelligence” and “Caribbean”. Similarly, the search term “AI literacy courses in Jamaica” was used (repeated for each country). Finally, the search term “artificial intelligence” was used to search the websites of the regional tertiary institutions and newspapers. All 45 documents were selected and used for analysis. This data collection phase extended from April 2024 to May 2024.

Conceptual content analysis was employed to identify fixed, explicit themes within the data (<https://www.publichealth.columbia.edu/research/population-health-methods/content-analysis>). The themes employed were perceived benefits and challenges of AI use (RQ1); primary, secondary, tertiary and adult education levels (RQ2) (offered through academic programmes, courses, workshops, conferences, seminars, public lectures and other training sessions) and positive and negative attitudes (RQ3). All coding was completed by hand.

Results

- RQ1. What are the perceived benefits and challenges of AI use in Jamaica, Trinidad and Tobago, Barbados and Antigua?

Regional governments, citizens, government-sponsored institutions and private businesses have acknowledged the potential benefits and challenges of adopting AI. This recognition is evident in various national vision documents and information and communication technology policies (Ministry of Planning and Development, 2016; Jamaica Ministry of Science, Energy and Technology, n.d.), social media posts (Government Information Service of Barbados, 2023), press articles and focused workshops (Government Information Service of Barbados, 2023). The benefits of adopting AI included improved efficiencies and decision-making, enhanced innovation (King, 2023; World Economic Forum, 2023; Terry, 2023), increased productivity (Antigua Observer, 2023a) and revenue growth (Avasant LLC, 2022) (See Table 1).

The challenges of adopting AI included potential job displacements (Greaves, 2024), data privacy concerns (Montoya & Rivas, 2019; UNESCO, 2023) and ethical issues (Emmanuel, 2024; UNESCO, 2023; Ghouralal, 2024; Antigua Observer, 2023b; Simon, 2023a, b).

Table 1. Benefits and challenges of AI adoption in the Caribbean

Element	Item	Source
Benefits	Improved efficiency and decision-making	King (2023), World Economic Forum (2023) and Terry (2023)
	Increased productivity	Antigua Observer (2023a) and King (2023)
Challenges	Revenue growth	Avasant LLC (2022)
	Job displacement	Greaves (2024)
	Data privacy	Montoya and Rivas (2019) and UNESCO (2023)
	Ethical issues	Emmanuel (2024), Ghouralal (2024), Antigua Observer (2023a,b) and Simon (2023a, b)
Source(s): Authors' own work		

Importantly, Greaves (2024) noted that while short-term job displacements were likely, new opportunities for growth and development would also emerge.

RQ2. To what degree is AI literacy education implemented in Jamaica, Trinidad and Tobago, Barbados and Antigua?

AI literacy education has been implemented in various forms across the region. In Jamaica, the BSc. Artificial intelligence (UCC, n.d.-a), BSc. Applied Artificial Intelligence (UTECH, 2023) and MS Computer Science in Artificial Intelligence and Machine Learning (UCC, n.d.-b) degrees have been launched. Short courses have been offered by regional (DECE, n.d. UTT, 2023) and extra-regional course providers (TheKnowledgeAcademy, n.d.; Unichrone, n.d.; NTI, n.d.; Cyber Nations, n.d.; SPOCLEARN, n.d.; The Student Revolving Loan Fund, n.d.; Government of Barbados, 2023) and longer courses by universities in Trinidad and Tobago (UWI, n.d.-a; UWI, n.d.-c) and Barbados (UWI, 2023c). Workshops have been held in Barbados (UWI News, 2023a, b) and Jamaica (UWI, 2023a; UCC, 2023) and conferences in Jamaica (Sterling, 2023; Barrett, 2024; Loop News, 2024) (See Table 2).

Table 2. AI literacy education in the Caribbean

Country	Education level	Source	Frequency
Jamaica	Secondary	UNESCO (n.d.)	1
	Tertiary	UCC (n.d.-a, b), UWI (2023a), UWI (2023b) and UTECH (2023)	4
	Adult	Hamilton (2023), Sterling (2023), Barrett (2024), Loop News (2024), Observer (2023), TheKnowledgeAcademy (n.d.) and UCC (2023)	7
Trinidad and Tobago	Primary	UN (2020)	1
	Secondary	UN (2020)	1
	Tertiary	UWI (n.d.-a), UWI (n.d.-b), UWI (n.d.-c), UWI Today (2018) and UN (2020)	5
	Adult	Unichrone (n.d.), TheKnowledgeAcademy (n.d.), DECE (n.d.), UN (2020), UTT (2023), and Ghouralal (2024)	6
Barbados	Tertiary	UWI News (2023a), UWI News (2023b) and UWI (2023c)	3
	Adult	Unichrone (n.d.), TheKnowledgeAcademy (n.d.), NTI (n.d.), Cyber Nations (n.d.), SPOCLEARN (n.d.), The Student Revolving Loan Fund (n.d.), Government of Government Information Service of Barbados (2023) and UNESCO (2023)	8
Antigua	Adult	Unichrone (n.d.)	1
Source(s): Authors' own work			

AI literacy seminars in Trinidad and Tobago (UWI, n.d.-b) and public lectures in Jamaica (Hamilton, 2023; Observer, 2023) and Trinidad and Tobago (UWI Today, 2018) have been held. Additionally, a police training session in Trinidad and Tobago (Ghouralal, 2024) was offered. Finally, a government initiative to equip young people with future skills in Trinidad and Tobago (UN, 2020), as well as a United Nations Educational, Scientific and Cultural Organization (UNESCO) consultation with Caribbean governments to discuss draft Recommendation on the Ethics of AI (UNESCO, 2023), was launched.

A similar number of AI literacy training opportunities have been held in Trinidad and Tobago (13 opportunities), Jamaica (12 opportunities) and Barbados (11 opportunities). Conversely, only one training opportunity has been held in Antigua.

RQ3. What are the attitudes of Caribbean stakeholders from Jamaica, Trinidad and Tobago, Barbados and Antigua toward the integration of AI into their daily lives?

Jamaica, Trinidad and Tobago, Barbados and Antigua wanted to leverage AI for the digital transformation of the public sector, support social growth and economic diversification, maximise resource output for academic libraries and improve services, such as healthcare and agriculture (see Table 3) (ECD/CAF, 2022; Duncan, 2022). These countries also acknowledged the potential of AI in enhancing daily life, strengthening economies, diversifying economic opportunities and advancing government services (ECD/CAF, 2022; Mimler *et al.*, 2022). Nevertheless, the importance of addressing challenges resulting from the integrating of AI into society, such as job replacement was stressed. Moreover, there was a shared concern among citizens regarding the ethical use of AI and lack of equal access to AI technologies (Williams, 2021).

Stakeholders from Jamaica and Barbados had both positive and negative attitudes towards AI use. Positive attitudes varied, such as its use to educate the public (Deer, 2004) and to support tourism and public service sectors (Williams, 2023); nevertheless, legal issues were a common negative attitude (Mimler *et al.*, 2022; Williams, 2023). Conversely, Trinidad and Tobago and Antigua only had positive attitudes towards AI use.

Discussion

The Caribbean region has already identified potential benefits of AI given innovative applications, such as AI models and data analytics used to deliver a consistent, reliable water

Table 3. The attitudes of Caribbean stakeholders toward AI use

Country	Attitude	Element	Source
Jamaica	Positive	Educating public using AI technologies	Deer (2004) Mimler <i>et al.</i> (2022)
	Negative	Concerns with the legal implications of AI capabilities in the creative industries	
Trinidad and Tobago	Positive	Concern with job losses and data privacy	CTU (2023)
		Citizens recognise the benefits of AI in improving the quality of life	
Barbados	Positive	Willingness to use AI to improve public services and advance cybersecurity	Williams (2023)
	Negative	Citizens are supportive of AI integration in tourism and public service sectors	
Antigua	Positive	Advocates for policy framework devoted to tackling ethical and privacy issues	Simon (2023a, b)
		Supportive of AI to reform government services and foster digital entrepreneurship	
		Advocates for AI use in media industry to navigate the fluid media landscape	

Source(s): Authors' own work

supply (Terry, 2023); the use of AI in assistive technologies (Als, Norville, & Layne, 2023) and the optimisation of well placement to maximise potable water collection whilst minimising saltwater incursion (World Economic Forum, 2023). Additionally, GAI has been successfully used in higher education classrooms in Barbados (Walcott, 2024b). Nevertheless, Caribbean citizens have voiced ethical (Srinivasan & Chander, 2021) and data privacy (Dilmaghani *et al.*, 2019) concerns, just like their international counterparts.

The results of the present study show that there have been 37 AI literacy training opportunities (academic programmes, courses, workshops, conferences, seminars, public lectures or other training sessions) across the Caribbean at the primary, secondary, tertiary and adult learner levels (Table 2). Approximately 35% of these were held in Trinidad and Tobago, 32% in Jamaica, 30% in Barbados and 3% in Antigua. Moreover, across the Caribbean, approximately 60% of these opportunities were for adult learners, 32% for tertiary learners, 5% for secondary learners and 3% for primary learners. These results are in line with the 2019 AI Readiness Rankings (Montoya & Rivas, 2019) with Trinidad and Tobago having the most AI literacy training opportunities (having the best readiness ranking) and Antigua the least.

It seems that businesses have been attempting to monetise AI literacy education given the focus on adult learners (60%). Furthermore, many of the short course providers are extra-regional, which may result in an inequity of AI literacy competencies due to the digital divide in the Caribbean, a concern voiced by Williams (2021). A more pressing issue is the limited AI literacy education for primary and secondary learners. While it is true that AI literacy framework research is in its infancy at the primary level, for example, Kong and Yang (2023), the potential for AI induced job displacements (Greaves, 2024) raises significant concerns that Caribbean young people may be ill-equipped to capitalise on the new opportunities created by AI. Caribbean governments, in collaboration with local universities, must therefore remedy this situation now before it is too late.

Caribbean citizens share similar attitudes towards the integration of AI into their daily lives. There is agreement among them that the use of AI can improve various aspects of their societies, including education, healthcare, tourism, media and agriculture (Williams, 2021, 2023). Caribbean governments are also supportive of AI integration, advocating for its use to improve the services of the public sector and for social growth (CTU, 2023). Only two (Barbados and Jamaica) of the four countries under study voiced concerns about data privacy, ethical and legal issues. Notably, these are also concerns noted in the literature and result from the large amounts of data being used to train AI systems (Dilmaghani *et al.*, 2019).

To capitalise on the benefits of AI, Caribbean governments and private institutions are digitising the vast quantities of data needed to train AI models. Unavoidably, this incurs costs related to data security, data privacy and ethical use. These challenges are daunting and will require comprehensive governance (Antigua Observer, 2023b); however, the lack of a guiding AI literacy policy may invariably lead to exclusion of some social groups. The focus going forward therefore must be on leveraging AI for innovation while addressing potential ethical and practical concerns.

International comparisons across the three-dimensional AI literacy framework proposed by Kong and Zhang (2021) suggest that, for the cognitive dimension, the Caribbean primarily focuses on tertiary and adult education. In contrast, global frameworks emphasise age-appropriate progression from early childhood education (Kindergarten) to tertiary education (university level) (Kandlhofer *et al.*, 2016). Initiatives like K-12 programs emphasise complex algorithmic and problem-solving skills, but Caribbean primary and secondary students' exposure remain limited (Shin, 2021). This gap suggests a narrowing in the development of cognitive AI literacy, potentially hindering continuity in advanced competencies essential for evolving roles and differentiated skill sets among stakeholders (Faruqe *et al.*, 2021).

For the sociocultural dimension, Caribbean stakeholders articulate concerns that align with global issues such as bias, privacy, inequity and ethical governance, reflecting similar risk perceptions recognised internationally (O'Neil, 2016; Noble, 2018; Dilmaghani *et al.*, 2019; Srinivasan & Chander, 2021; UNESCO, 2023). While global discussions increasingly

integrate ethical reflection into early educational frameworks, many K-12 implementations in the Caribbean often neglect explicit ethics, focusing primarily on cognitive development (Williams, 2021; CTU, 2023; UNESCO, 2023). This creates a contrast, while sociocultural concerns are prominently addressed in policy and public discourse, the formal inclusion of these ethical elements in early curricula is limited. In contrast, some international educational studies emphasise structured progression but lack detailed ethical components (Shin, 2021). This situation presents an opportunity to translate the existing sociocultural awareness in regional discourse into integrated ethics modules in earlier education.

Regarding the affective dimension, international frameworks emphasise the intentional design of strategies to enhance motivation, confidence and reflective engagement (Kong & Yang, 2023). For example, the AEER (attention, engagement, error-based learning and reflection) model employed by the authors in their study aimed to foster conceptual understanding and learning-to-learn skills. Additionally, these frameworks stress the importance of positive emotional experiences for meaningful community participation (Kong & Zhang, 2021).

In the Caribbean, policy visions and citizen aspirations generally show positive attitudes toward using AI to improve services and diversify economies, alongside concerns about displacement and access (Williams, 2021, 2023; Greaves, 2024; Dilmaghani *et al.*, 2019). However, these affective responses appear to stem more from broader socio-economic narratives than from systematic pedagogical approaches, such as those in international interventions (Kong & Yang, 2023). This indicates an effective implementation gap; while positive attitudes exist, structured strategies to build resilience and sustained engagement are still underdeveloped.

Recognising that AI literacy research is still in its early stages globally, with limited university-level resources and fundamental studies (Laupichler *et al.*, 2022; Southworth *et al.*, 2023), the Caribbean baseline established in this research is significant. It highlights a unique imbalance that can guide future cross-regional studies exploring how reallocating sociocultural emphasis towards earlier cognitive and affective pedagogies may enhance equitable skill acquisition. This approach addresses the need for evolving competency frameworks while suggesting strategies to mitigate risks associated with the regional digital divide (Williams, 2021; Montoya & Rivas, 2019).

Limitations

The data used in this research were collected by other people for other purposes; therefore, the types of questions that could be asked were restricted; however, since the data were readily available, the time and cost of data collection were reduced (Johnston, 2014). In addition, the availability of multiple data sources improved the validity of the research. The researchers also assumed that information pertaining to AI literacy training opportunities was publicly available and readily accessible online.

Recommendations

To improve the state of AI literacy in the Caribbean, the following recommendations are offered:

- (1) Create/adapt an AI policy. UNESCO's draft Recommendation on the Ethics of AI (UNESCO, 2023) could be adapted to address technology, cultural, societal and/or political needs given the existing digital divide.
- (2) Create a standardised, age-appropriate Caribbean AI literacy curriculum across all education levels. This curriculum must be holistic in nature (Kong & Zhang, 2021) and sensitive to the cultural, societal and political needs of Caribbean people (Stolpe & Hallström, 2024). The results of this study have clearly shown that there is inequity

related to AI literacy education across the different education levels in the Caribbean, with the primary and secondary levels across the countries explored (Table 2) being neglected (for example, in Barbados and Antigua). Reversing this trend is essential to promote future economic growth.

- (3) Create a Caribbean-wide AI Implementation Plan. This plan should address the concerns related to implementing AI at all education levels. This plan should include citizen education programmes to alleviate fears of AI use and create positive attitudes towards AI, the phased integration of AI into the business, healthcare and education sectors and the utilisation of AI in e-governance.

Conclusion

A secondary data analysis research design was used to investigate AI literacy education being offered in Jamaica, Trinidad and Tobago, Barbados and Antigua. The study was guided by an AI literacy education conceptual framework that examined three key dimensions: understanding of AI concepts, attitudes towards AI and ethical use of AI. Google, academic research databases, regional online newspapers and tertiary institutions websites were searched and the documents found analysed. It was reported that the common benefits and challenges of AI identified worldwide, such as revenue growth, and ethical issues are also applicable to the Caribbean; most of the short courses are supplied by extra-regional course providers for adult learners, and many Caribbean citizens support AI integration. The authors recommend developing three key components for the Caribbean: an AI literacy curriculum, an AI policy and an AI literacy implementation plan. This work helps governments to formulate strategic plans necessary to prepare for Caribbean-wide AI literacy education.

References

- Ali, O., Abdelbaki, W., Shrestha, A., Elbasi, E., Alryalat, M. A. A., & Dwivedi, Y. K. (2023). A systematic literature review of artificial intelligence in the healthcare sector: Benefits, challenges, methodologies, and functionalities. *Journal of Innovation and Knowledge*, 8(1), 100333. doi: 10.1016/j.jik.2023.100333.
- Als, A., Norville, T., & Layne, R. (2023). VisualEyez—assisting the visually impaired with Barbadian Banknote detection. In *2023 IEEE Gaming, Entertainment, and Media Conference (GEM)* (pp. 1–6). IEEE.
- Antigua Observer (2023a). EON Reality partners with Sandals Corporate University to integrate spatial AI in hospitality education. Available from: <https://antiguaobserver.com/eon-reality-partners-with-sandals-corporate-university-to-integrate-spatial-ai-in-hospitality-education/>
- Avasant LLC. (2022). National strategy to develop Jamaica’s global digital Services sector: 2021-2025. Available from: <https://dobusinessjamaica.com/wp-content/uploads/2022/05/NATIONAL-STRATEGY-TO-DEVELOP-JAMAICAS-GLOBAL-DIGITAL-SERVICES-SECTOR.pdf>
- Brown, M., Spaulding, S., Montes, M., & Durham, C. (2021). *Understanding the needs of adult learners in Chicago: A data profile*. Urban Institute. Available from: <https://www.urban.org/sites/default/files/publication/105143/understanding-the-needs-of-adult-learners-in-chicago-a-data-profile.pdf>
- Dilmaghani, S., Brust, M. R., Danoy, G., Cassagnes, N., Pecero, J., & Bouvry, P. (2019). Privacy and security of big data in AI systems: A research and standards perspective. In *2019 IEEE International Conference on Big Data (Big Data)*, Los Angeles, CA (pp. 5737–5743). doi: 10.1109/BigData47090.2019.9006283.
- Emmanuel, R. A. (2024). *Online safety tips for 2024: Protecting you and your family*. Antigua Observer. Available from: <https://antiguaobserver.com/online-safety-tips-for-2024-protecting-you-and-your-family/>

- Faruqe, F., Watkins, R., & Medsker, L. (2021). Competency model approach to AI literacy: Research-based path from initial framework to model. *arXiv Preprint* arXiv:2108.05809.
- Ghoulral, D. (2024). *TTPS officers to benefit from AI integration training*. Trinidad and Tobago: Loop News. Available from: <https://tt.loopnews.com/content/ttps-officers-benefit-ai-integration-training>
- Greaves, T. (2024). *AI brings new opportunities*. NationNews. Available from: <https://nationnews.com/2024/02/29/ai-brings-new-opportunities/>
- Green, C., & Clayton, A. (2021). Ethics and AI innovation, international review of information ethics, 29 (March). 1–13. doi: [10.29173/irrie417](https://doi.org/10.29173/irrie417).
- Hill-Yardin, E. L., Hutchinson, M. R., Robin, L., & Spencer Sarah, J. (2023). A Chat(GPT) about the future of scientific publishing. *Brain, Behavior, and Immunity*, 110, 152–154. doi: [10.1016/j.bbi.2023.02.022](https://doi.org/10.1016/j.bbi.2023.02.022).
- Javaid, M., Haleem, A., Singh, R. P., & Suman, A. R. (2022). Artificial intelligence applications for Industry 4.0: A literature-based study. *Journal of Industrial Integration and Management*, 07 (01), 83–111. doi: [10.1142/s2424862221300040](https://doi.org/10.1142/s2424862221300040).
- Johnston, M. P. (2014). Secondary data analysis: A method of which the time has come. *Qualitative and Quantitative Methods in Libraries*, 3(3), 619–626.
- Kandlhofer, M., Steinbauer, G., Hirschmugl-Gaisch, S., & Huber, P. (2016). Artificial intelligence and computer science in education: From kindergarten to university. In *2016 IEEE frontiers in education conference (FIE)* (pp. 1–9). IEEE.
- Kong, S.-C., & Yang, Y. (2023). Designing and evaluating an attention-engagement-error-reflection (AEER) approach to enhance primary school students' artificial intelligence literacy and learning-to-learn skills: A pilot study. In *Proceedings of the 31st International Conference on Computer Education* (pp. 394–399).
- Kong, S. C., & Zhang, G. (2021). A conceptual framework for designing artificial intelligence literacy programmes for educated citizens. In *Conference proceedings (English paper) of the 25th Global Chinese Conference on Computers in Education (GCCCE 2021)* (pp. 11–15). Centre for Learning, Teaching and Technology, The Education University of Hong Kong.
- Laupichler, M. C., Aster, A., Schirch, J., & Raupach, T. (2022). Artificial intelligence literacy in higher and adult education: A scoping literature review. *Computers and Education: Artificial Intelligence*, 3, 100101. doi: [10.1016/j.caeai.2022.100101](https://doi.org/10.1016/j.caeai.2022.100101).
- Long, D., & Magerko, B. (2020). What is AI literacy? Competencies and design considerations. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1–6). doi: [10.1145/3313831.3376727](https://doi.org/10.1145/3313831.3376727).
- Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. B. (2016). Intelligence unleashed: An argument for AI in education.
- Madden, O. N., McKenzie, N., & Daley, J. L. (2025). Effects of ChatGPT and generative artificial intelligence in higher education: Voices of Jamaican academic faculty. *International Journal of Education and Humanities*, 5(2), 297–308. doi: [10.58557/ijeh.v5i2.314](https://doi.org/10.58557/ijeh.v5i2.314).
- Morandín-Ahuerma, F. (2022). What is artificial intelligence?. *International Journal of Research Publication and Reviews*, 3(12), 1947–1951. doi: [10.55248/gengpi.2022.31261](https://doi.org/10.55248/gengpi.2022.31261).
- Noble, S. U. (2018). *Algorithms of oppression: How search engines reinforce Racism Illustrated Edition*. New York, NY: NYU Press.
- O'Neil, C. (2016). *Weapons of math destruction: How big data increases inequality and threatens democracy*. Crown. 978-0553418811.
- Olari, V., & Romeike, R. (2021). Addressing ai and data literacy in teacher education: A review of existing educational frameworks. In *Proceedings of the 16th Workshop in Primary and Secondary Computing Education* (pp. 1–2).
- Sheikh, H., Prins, C., & Schrijvers, E. (2023). Artificial intelligence: Definition and background. In: Mission AI. *Research for Policy*, 15–41, Springer, Cham. doi: [10.1007/978-3-031-21448-6_2](https://doi.org/10.1007/978-3-031-21448-6_2).

- Shin, S. (2021). A study on the framework design of artificial intelligence thinking for artificial intelligence education. *International Journal of Information and Education Technology*, 11(9), 392–397. doi: [10.18178/ijiet.2021.11.9.1540](https://doi.org/10.18178/ijiet.2021.11.9.1540).
- Simon, S. (2023a). Deep fake video of Donald Trump targets Antigua and Barbuda. Available from: <https://antiguaobserver.com/deep-fake-video-of-donald-trump-targets-antigua-and-barbuda/>
- Southworth, J., Migliaccio, K., Glover, J., Reed, D., McCarty, C., Brendemuhl, J., & Thomas, A. (2023). Developing a model for AI across the curriculum: Transforming the higher education landscape via innovation in AI literacy. *Computers and Education: Artificial Intelligence*, 1–10, 4, 100127. doi: [10.1016/j.caeai.2023.100127](https://doi.org/10.1016/j.caeai.2023.100127).
- Srinivasan, R., & Chander, A. (2021). Biases in AI systems. *Communications of the ACM*, 64(8), 44–49. doi: [10.1145/3464903](https://doi.org/10.1145/3464903).
- Stolpe, K., & Hallström, J. (2024). Artificial intelligence literacy for technology education. *Computers and Education Open*, 6, 100159. doi: [10.1016/j.caeo.2024.100159](https://doi.org/10.1016/j.caeo.2024.100159).
- Topol, E. (2019). *Deep medicine: How artificial intelligence can make healthcare human again*. Basic Books. 978-1541644632.
- Walcott, P. A. (2023). COVID-19: A catalyst for E-commerce in the food and beverage service industry in Barbados?. In *Interdisciplinary Perspectives on Covid-19 and the Caribbean, Volume 1: The State, Economy and Health* (pp. 293–320). Cham: Springer International Publishing.
- Walcott, P. A. (2024a). AI teaching and learning in Barbados. In *EdMedia+ Innovate Learning* (pp. 296–304). Association for the Advancement of Computing in Education (AACE).
- Walcott, P. A. (2024b). Towards sustainable higher education through generative AI and the virtual undergraduate research laboratories framework. *The UWI Quality Education Forum*, 28, 37–54.
- Walcott, P. A., & Walcott, B. (2024). AI teaching and learning in St. Lucia. In *E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education* (pp. 102–107). Association for the Advancement of Computing in Education (AACE).
- World Economic Forum (2023, June 21). Barbados is using data and technology to boost climate resilience – Here's how. *World Economic Forum*. Available from: <https://www.weforum.org/agenda/2023/06/barbados-climate-resilience-data-technology/>
- Zhuo, Z., Larbi, F. O., & Addo, E. O. (2021). Benefits and risks of introducing artificial intelligence in Commerce: The case of manufacturing companies in West Africa. *Amfiteatru Economic*, 23(56), 174–194. doi: [10.24818/ea/2021/56/174](https://doi.org/10.24818/ea/2021/56/174).

Secondary Sources:

- Antigua Observer (2023b). Commonwealth Artificial Intelligence Consortium to meet in New York to advance AI action plan. Available from: <https://antiguaobserver.com/commonwealth-artificial-intelligence-consortium-to-meet-in-new-york-to-advance-ai-action-plan/>
- Barrett, A. (2024). AI set to revamp various sectors across Jamaica. *Our Today*. Available from: <https://our.today/ai-set-to-revamp-various-sectors-across-jamaica/>
- Caribbean Telecommunications Union (CTU) (2023). Caribbean leaders commit to regional digital integration, [Press Release], Available from: <https://ctu.int/caribbean-leaders-commit-to-regional-digital-integration/>
- Cyber Nations (n.d.). Artificial intelligence analyst. Available from: <https://cyber-nations.com/ai-analyst>
- Deer, L. H. (2004). *Jamaica must embrace a future where AI takes on teaching roles*. The Gleaner. Jamaica, Available from: <https://jamaica-gleaner.com/article/letters/20240511/jamaica-must-embrace-future-where-ai-takes-teaching-roles>
- DECE (n.d.). *Introduction to artificial intelligence (AI)*. Department of Electrical and Computer Engineering: Continuing & Professional Education. Available from: <https://ecng.sta.uwi.edu/courses/cpd/courses/ECNG01.html>

- Duncan, A. (2022). The intelligent academic library: Review of AI projects and potential for Caribbean libraries. *Library Hi Tech News*, 39(5), 12–15. doi: [10.1108/LHTN-01-2022-0014](https://www.researchgate.net/publication/359269103_The_intelligent_academic_library_review_of_AI_projects_potential_for_Caribbean_libraries). Available from: https://www.researchgate.net/publication/359269103_The_intelligent_academic_library_review_of_AI_projects_potential_for_Caribbean_libraries
- ECD/CAF (2022), *The strategic and responsible use of artificial intelligence in the public sector of Latin America and the Caribbean*, OECD Public Governance Reviews, OECD Publishing, Paris. doi: [10.1787/1f334543-en](https://doi.org/10.1787/1f334543-en). Available from: <https://oecd-opsi.org/wp-content/uploads/2022/03/lac-ai.pdf>
- Government Information Service of Barbados (2023). Embracing A digital Caribbean: Opportunities for growth and innovation [video]. Available from: <https://www.facebook.com/gisbarbados/videos/735647878390860/>
- Government of Barbados (2023). Organización de los Estados Americanos. Available from: https://www.linkedin.com/posts/government-of-barbados_oasyouthacademy-education-artificialintelligence-activity-7072202930346446848-LXYx
- Hamilton, D. (2023). Jamaica: Education Minister Outlines benefits of artificial intelligence, Magnetic Media, Available from: <https://magneticmediatv.com/2023/10/jamaica-education-minister-outlines-benefits-of-artificial-intelligence/>
- Jamaica Ministry of Science, Energy and Technology (n.d.). National information and communications technology (ICT) strategy and action plan 2009-2030. Available from: <https://www.mset.gov.jm/wp-content/uploads/2019/09/ICT-Sector-Plan-Complete.pdf>
- King, M. (2023). Trinidad and Tobago's economy in the era of artificial intelligence. *Trinidad Express*. Available from: https://trinidadexpress.com/business/local/t-t-s-economy-in-the-era-of-artificial-intelligence/article_3d627998-ff46-11ed-8f23-832b2bd1be3e.html
- Loop News (2024). AI likely to reshape sectors, enhance productivity - Morris Dixon. Available from: <https://jamaica.loopnews.com/content/ai-likely-reshape-sectors-enhance-productivity-morris-dixon>
- Ministry of Planning and Development (2016). *Vision 2030: The national development strategy of Trinidad and Tobago 2016-2030*. Government of the Republic of Trinidad and Tobago. Available from: <https://www.planning.gov.tt/sites/default/files/Vision%202030-%20The%20National%20Development%20Strategy%20of%20Trinidad%20and%20Tobago%202016-2030.pdf>
- Mimler, M., Bonadio, E., Mansingh, G., Corthésy, N., Stone, M., McDaniel, G., . . . Harvey, S. (2022). Implications of artificial intelligence in action - a Jamaican perspective. *European Intellectual Property Review*, 44(10), 611–622. Available from: https://openaccess.city.ac.uk/id/eprint/28875/1/paper_AI_Jamaica.pdf
- Montoya, L., & Rivas, P. (2019). Government AI readiness meta-analysis for Latin America and the Caribbean. In *Proceedings of the 2019 IEEE International Symposium on Technology and Society (ISTAS)* (pp. 1–8). doi: [10.1109/ISTAS48451.2019.8937869](https://doi.org/10.1109/ISTAS48451.2019.8937869).
- NTI (n.d.). *Coursera: Find a course*. National Transformation Initiative. Available from: <https://training.nti.org.bb/coursera-courses-browse/>
- Observer (2023). Local experts explore artificial intelligence and education at Rickert Allen memorial lecture. Available from: <https://www.jamaicaobserver.com/2023/05/27/local-experts-explore-artificial-intelligence-and-education-at-rickert-allen-memorial-lecture/>
- Simon, S. (2023b). Embracing the future: Veteran broadcaster advocates for AI in Caribbean media. *The Observer*. Available from: <https://antiguaobserver.com/embracing-the-future-veteran-broadcaster-advocates-for-ai-in-caribbean-media/>
- SPOCLEARN (n.d.). AI & ML courses in Barbados. Available from: <https://www.spoclearn.com/bb/courses/ai-and-ml/>
- Sterling, N.. (2023). Teachers encouraged to embrace artificial intelligence. *Jamaica Information Service*. Available from: <https://jis.gov.jm/teachers-encouraged-to-embrace-artificial-intelligence/>

- Terry (2023). Use AI to drive water solutions. *Nation News*. Available from: <https://nationnews.com/2023/07/01/use-ai-drive-water-solutions/>
- The Knowledge Academy (n.d.). Training the world's professionals. Available from: <https://www.theknowledgeacademy.com/>
- The Student Revolving Loan Fund (n.d.). Loans. Available from: <https://srlfloan.edu.bb/Loans/Artificial-Intelligence-AI.aspx>
- UCC (2023). *UCC's 7th Annual research conference presents - the AI prompt engineering workshop: Unleashing the power of large language models*. University of the Commonwealth Caribbean. Available from: <https://ucc.edu.jm/events/ucc-conference/2023/workshop>
- UCC (n.d.-a). *Artificial intelligence*. University of the Commonwealth Caribbean. Available from: <https://www.ucc.edu.jm/programmes/tm/bsc-in-artificial-intelligence>
- UCC (n.d.-b). *MS computer science in artificial intelligence and machine learning*. University of the Commonwealth Caribbean. Available from: <https://online.ucc.edu.jm/ms-computer-science-in-artificial-intelligence-and-machine-learning/>
- UN (2020). *A new direction for Trinidad and Tobago's education system*. Trinidad and Tobago: United Nations. Available from: <https://trinidadandtobago.un.org/en/102861-new-direction-tt%E2%80%99s-education-system>
- UNESCO (2023). Caribbean experts discuss on the Ethics of Artificial Intelligence to set global norms. Available from: <https://www.unesco.org/en/articles/caribbean-experts-discuss-ethics-artificial-intelligence-set-global-norms>
- UNESCO (n.d.). Higher education in Jamaica for a sustainable and inclusive future. Available from: <https://mgiep.unesco.org/article/higher-education-in-jamaica-for-a-sustainable-and-inclusive-future>
- Unichrone (n.d.). Our training sessions are held across globe. Available from: <https://unichrone.com/>
- UTECH (2023). *Bachelor of Science in applied artificial intelligence*. Jamaica: University of Technology. Available from: <https://www.utechjamaica.edu.jm/academics/colleges-faculties/fenc/mod-guide/ModuleSelectionGuideB.Sc.inAppliedArtificialIntelligence.pdf>
- UTT (2023). *Artificial intelligence for administrative professionals online course*. The University of Trinidad and Tobago. Available from: https://utt.edu.tt/index.php?articles=1&article_key=9038&wk=1
- UWI Today (2018). *Heady machinery*. St. Augustine: The University of the West Indies. Available from: https://sta.uwi.edu/UWIToday/archive/may_2018/article1.asp
- UWI (2023a). *FST/SOE workshop for teachers | artificial intelligence: An orientation and exploration of its classroom applications*. The University of the West Indies, Mona. Available from: <https://www.mona.uwi.edu/fst/fstsoe-workshop-teachers-artificial-intelligence-orientation-and-exploration-its-classroom>
- UWI (2023b). *Faculty of science and technology: Undergraduate student Handbook*. The University of the West Indies, Mona. Available from: https://www.mona.uwi.edu/fst/sites/default/files/fpas/uploads/fst_undergraduate_handbook_2023-2024_0.pdf
- UWI (2023c). *Faculty of humanities and education: Undergraduate handbook 2023-2024*. The University of the West Indies, Cave Hill. Available from: <https://www.cavehill.uwi.edu/chol/documents/handbooks/2023-2024/draft-fhe-ug-2023-2024-handbook-august-28.aspx>
- UWI (n.d.-a). *COMP 3608 intelligent systems*. The University of the West Indies, St. Augustine. Available from: <https://sta.uwi.edu/fst/dcit/content/comp3608>
- UWI (n.d.-b). *Artificial intelligence seminar | revolutionizing corporate success*. St. Augustine: The University of the West Indies. Available from: <https://sta.uwi.edu/fss/artificial-intelligence-seminar-revolutionizing-corporate-success>
- UWI (n.d.-c). *COMP 6930 machine learning and data mining*. St. Augustine: The University of the West Indies. Available from: <https://sta.uwi.edu/fst/dcit/content/comp6930>

- UWI News (2023a). *Artificial intelligence in higher education*. Cave Hill: The University of the West Indies. Available from: <https://cavehill.uwi.edu/cetl/news-events/artificial-intelligence-in-higher-education.aspx>
- UWI News (2023b). *Using artificial intelligence to boost productivity*. Cave Hill: The University of the West Indies. Available from: <https://cavehill.uwi.edu/cetl/news-events/using-artificial-intelligence-to-boost-productivity.aspx>
- Williams, D. (2021). Ethical considerations for the use of artificial intelligence: Lessons from the evolution of digital transformation strategies at national levels in the Caribbean. Available from: <https://proyectoguia.lat/wp-content/uploads/2022/07/ethical-considerations-V2-1.pdf>
- Williams, S. (2023). #BTCcolumn – artificial intelligence in the Caribbean – unchecked influence and cultural impact. Available from: <https://barbadostoday.bb/2023/10/24/btccolumn-artificial-intelligence-in-the-caribbean-unchecked-influence-and-cultural-impact/>

Corresponding author

Paul Walcott can be contacted at: paul.walcott@uwi.edu