

Sensory marketing and accessible tourism: An AI-generated article

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Abstract

Recently, there has been a startling increase in interest in accessible tourism from both academics and industry professionals, necessitating the development of distinctive marketing strategies, involving sensory marketing. Given the existing literature, the link between sensory marketing and accessible tourism has not yet been researched. Consequently, the current paper aims to explore how to effectively adopt sensory marketing for accessible tourism using AI tools. In doing so, this work depends on an interview with ChatGPT to (1) highlight the role of sensory marketing in accessible tourism, (2) illustrate the opportunities and challenges of using AI-generated sensory marketing content for accessible tourism, and (3) provide proper practical guidelines and implications of adopting AI tools in sensory marketing for accessible tourism. The present study adds to the extant knowledge of tourism marketing by exploring the connection between sensory marketing and accessible tourism and unveiling the potential adoption of AI-produced sensory marketing tactics for accessible tourism.

Keywords: Sensory marketing, accessible tourism, AI, ChatGPT

Type: AI-generated Article

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I. Introduction

Accessible tourism is a niche market with specific needs that have to be considered while developing strategies for tourism marketing (Darcy, 2006; Darcy et al., 2010). Accessible tourism has hovered as a crucial element of tourism for the past few decades. A large part of research is concerned with disability studies, although inclusive vocabularies in both policies and actions are applied. These include some aspects such as accessibility, people-friendly, barrier-free, etc. (Darcy et al., 2010; Duignan et al., 2023). According to Sisto et al. (2022), accessible tourism can be described as the absence of physical, psychological, communicational, cultural, informational, or sensory obstacles while traveling to a specific destination. From a business standpoint, accessibility can be seen as a requirement for any tourism policy or plan, which in turn supports sustainable travel endeavors (Sisto et al., 2022). In this vein, the major goal of accessible tourism is to promote and implement physically and socially accessible tourist experiences for people with disabilities that support preserving their sense of individual autonomy and dignity (Duignan et al., 2023).

The accessible tourism market is characterized as a growing market segment resulting in several benefits to both locals and destinations such as encouraging social inclusion, boosting tourism destinations' competitiveness, offering financial assistance, eradicating prejudice, and raising the degree of acceptance, tolerance, and respect for the disabled community (e.g., Darcy et al., 2010). When accessible tourism facilities are adequately offered, disabled tourists may choose to visit nature-based attractions, thereby supporting sustainable tourism (Duignan et al., 2023). In addition, accessible tourism could provide employment opportunities for local communities and tour guides who can communicate in various suitable ways with disabled tourists. Teixeira et al. (2022) indicated that the hotel industry can benefit from accessible tourism if their information technology (e.g., websites) is user-friendly for disabled people.

Fernández-Díaz et al. (2023) put forth the key components of accessible tourism as (a) physical accessibility which refers to the surroundings, locations, structures, infrastructure, supplies, and tourist information supplied by destinations; (b) digital accessibility for websites, applications, social media, and other platforms and publications that use digital support. Consequently, the three crucial factors to develop accessible tourism, as indicated by Nigg and Peters (2022), are the use of information and communication technologies (ICTs), cooperation between concerned stakeholders, and awareness-raising activities. Furthermore, Fernández-Díaz et al. (2023) depicted the significance of the amalgamation of various interrelated components like environment, digital networks, information, infrastructure, heritage sites, and travel agents' services for successful accessible tourism.

Even though the travel motives of people with disabilities may not be all that different from those of other visitors, particular requirements should be considered. In a tourism supply chain, each visitor should have easy access to all supply chain elements such as reservation systems, accommodation, transportation, attractions, etc. (Garda, 2022). Impairments make it challenging for people to function because of the loss of varied degrees of emotional, mental, physical, sensory, or social faculties. In most cases, these situations prevent them from fully engaging in customary social activities. Accessible tourism should create a setting free of any barriers or hurdles for the numerous procedures and services related to travel preparations (e.g., Darcy et al., 2010). These obstacles can be overcome by utilizing the five human senses of sight, hearing, smell, taste, and touch while creating effective marketing and advertising campaigns by destination management organizations (DMOs). In this way, sensory marketing could facilitate accessible tourism so that everyone who visits, especially those with disabilities, could get exemplary service experiences (Agapito et al., 2014).

Sensory marketing refers to designated marketing activities that appeal to a consumer's senses and influence his/her cognition, judgment, and behavior (Krishna, 2012). According to Fong et al. (2022), the core of sensory marketing is the five senses that make up human perception: gustation, olfaction, audition, vision, and touch. When signals from the outside world are accessible by various modalities, they serve as resources for people's

information processing. The use of sensory marketing can create engrained cues that influence how consumers view a product's abstract qualities, such as its complexity. Conscious triggers that appeal to customers' basic sensations may be a more successful way to engage them given the multitude of marketing campaigns that are delivered to them every day. An increasing number of tourism service providers are creating emotional linkages in addition to rational ones to market conventional consumer goods or services by appealing to the human senses through sensory experiences. Thus, the service landscape is also establishing an environment for creating brand images instead of only the sale of goods and services (Hultén et al., 2009). Sensory marketing extends to various senses like auditory, taste, and visual creating an exceptional sensory experience for the users. Thus, sensory marketing can be more effective than mass marketing or relationship marketing, which can further influence individuals' behavior and collective experiences as multidimensional communication channels are utilized (Tekin & Kanat, 2022). Consequently, businesses from a variety of industries, including those in the tourism and hospitality sector, can use sensory marketing as a powerful tool to promote their goods and services (Fong et al., 2022; Singhal & Khare, 2015). This offers a significant chance to use sensory marketing to effectively promote various types of tourism, involving accessible tourism.

The main benefit of sensory marketing is its wide range of practices, which allows marketers to choose them based on how they would affect customers. The flexibility for customers to touch products freely, the music or noises played, the scent that is dispersed, and the expertly executed design are all factors that contribute to a unified and alluring retail space. Every sense can be aroused in a different way, which influences how customers behave (Singhal & Khare, 2015). Yang (2023) found that sensory experience acted as an affirmative stimulus on its customers. Music is also seen as an important tool to attract favorable responses and create a brand image, thereby proving that auditory senses can be targeted. It can further create and enhance a destination image by mediating historical nostalgia or mental imagination of the destination (Fan et al., 2023). Sensory marketing practices could be applied in the tourism and hospitality industry. For instance, Aksenova et al. (2022) indicated that a tourist could participate in cooking classes through a multisensory experience, which in turn shapes their perceptions of destinations.

Considering the interests and particular needs of persons with disabilities, digital technology can be used in tourism marketing to provide appropriate services rather than merely information about destinations and attractions (Ribeiro et al., 2018). This is based on the fact that the huge growth of digital content marketing is changing how people find information about tourist destinations and interact with one another (Mathew & Soliman, 2021). Hence, ICTs have the capability of assisting people with disabilities with their specific requirements, to make their tourism experience genuinely accessible by utilizing concepts such as cloud computing, voice/motion recognition, and advanced robotics (Lin et al., 2022). In this vein, Pelet et al. (2019) indicated that there is a growing number of tourism and hospitality businesses that have developed distinctive and sophisticated multisensory strategies to generate multisensory-related brand experiences for their visitors. They found that AI and IoT could awaken visitors' sensory experiences and boost their satisfaction and loyalty. Ryndach et al. (2021) demonstrated that AR and VR are significant components of AI, which in turn is beneficial for accessible tourism, as it transmits the content through various senses. Additionally, Ruusunen et al. (2023) found that the more readily available the information in the memory, the more frequently the customer would use it, either consciously or unconsciously, while evaluating products (e.g., tourist information or experiences). Alyahya and McLean (2022) indicated that VR influences the attitudes of customers toward their tourist destination, by enhancing their mental imagery, sense of participation in the experience, and their attitudes and visit intentions to a specific destination.

In the fourth industrial revolution, the integration of AI into various applications has been quickly advancing. Different AI applications nowadays have changed the way of human life. The emergence of pre-trained language models developed by Open AI such as ChatGPT had changed the way of research to include its perspectives in certain topics such as tourism education and research (e.g., Ivanov & Soliman, 2023), gastronomy in tourism

management and marketing (Fusté-Forné & Orea-Giner, 2023), corporate digital responsibility (CDR) (Tarbit et al., 2023), destination evangelism (Soliman & Al Balushi, 2023), and others. According to Fusté-Forné and Orea-Giner (2023), the application of AI in research is becoming increasingly well-known, and large language models represent a crucial development in AI (Soliman et al., 2023). ChatGPT has been developed as an illustration of generative pre-trained transformers (GPT), one of the models producing texts that is like that of humans (Ivanov & Soliman, 2023). In addition, the latest AI models give creative freelancers and SMEs in the hospitality and tourism industries new opportunities to produce and use innovative digital content for marketing. Amidst this fast-paced development of AI, little is known, however, about its current and potential uses and its probable effect on the stakeholders in the tourism and hospitality marketing industries (Tuomi, 2023).

Given the aforementioned discussion, sensory marketing is regarded as a proper marketing approach that can be effectively used for accessible tourism, especially while using generative AI applications. In this vein, some prior studies have been conducted to unveil sensory marketing covering different perspectives and scopes within the tourism and hospitality setting (e.g., Fong et al., 2022; Kim et al., 2020; Pelet et al., 2019). However, there is inadequate knowledge on how sensory marketing with the help of generative AI models can be used effectively in accessible tourism. This study addresses this gap by exploring the connection between sensory marketing and accessible tourism under the purview of a generative AI application (i.e., ChatGPT).

2. Sensory marketing for accessible tourism

This section includes the interview questions with ChatGPT and the responses generated by this AI application. To develop such questions, three brainstorming sessions were conducted by the researchers to outline the key aspects and scope of the current work. Consequently, several questions were suggested, revised, and combined to be finally drafted. In addition, it was decided that the questions could be classified into four main categories to clearly reflect the main purpose of this work, as follows: (1) the role of sensory marketing in accessible tourism, (2) opportunities of adopting AI applications in sensory marketing for accessible tourism, (3) challenges of adopting AI applications in sensory marketing for accessible tourism, and (4) practical guidelines and implications of adopting AI tools in sensory marketing for accessible tourism.

2.1. The role of sensory marketing in accessible tourism

Q1: Could you highlight the most effective interactive techniques of sensory marketing that can be used in the tourism industry?

AI output: "Sensory marketing techniques can be highly effective in the tourism industry, as they engage multiple senses to create memorable experiences for tourists. Here are some of the most effective interactive techniques of sensory marketing that can be used in the tourism industry:

1. **Visual Elements:** Utilize visually appealing elements to attract tourists and create a positive impression. This includes attention-grabbing signage, vibrant colors, well-designed brochures, and visually appealing displays of tourist attractions.
2. **Audio Enhancements:** Employ audio elements to enhance the sensory experience. This could involve playing soothing background music in hotel lobbies or restaurants, incorporating audio guides or narration in tours, or using soundscapes that reflect the natural surroundings of a destination.
3. **Olfactory Stimuli:** Utilize scents and fragrances to evoke positive emotions and create a memorable atmosphere. For example, hotels or resorts could infuse their lobbies with a signature scent that reflects their brand identity or the local environment.
4. **Taste Experiences:** Incorporate taste elements that reflect the local cuisine or culture. This could involve organizing food and wine tastings, promoting local culinary experiences, or offering samples of traditional dishes at tourism information centers.
5. **Tactile Interactions:** Provide opportunities for tourists to engage with their sense of touch. This could include interactive exhibits or displays where visitors can touch and feel certain materials or textures, offering hands-on workshops or classes that allow tourists to engage in local crafts or activities.

6. **Multisensory Presentations:** Create immersive experiences that engage multiple senses simultaneously. For example, 3D or virtual reality (VR) experiences can provide tourists with a sense of being present at a destination and allow them to explore the sights, sounds, and even smells of the location.
7. **Personalization:** Tailor sensory experiences to individual preferences and needs. Gather information about tourists' sensory preferences through surveys or preferences indicated during bookings and provide personalized recommendations or offerings accordingly. This could include suggesting specific scents or room ambiances, recommending activities based on preferred sensory experiences, or offering customized dining options.
8. **Storytelling:** Use sensory elements to convey stories and narratives about a destination or attraction. Engage tourists through audio or visual storytelling techniques that incorporate sensory cues, allowing them to immerse themselves in the local culture, history, or natural environment.

Remember, the key to effective sensory marketing in the tourism industry is to create authentic, immersive, and memorable experiences that resonate with the target audience and leave a lasting positive impression.”

Source: <https://chat.openai.com/share/3a020e5a-12d8-4a19-8151-14a389e0a99d>

Q2: Could you list the most proper strategies of sensory marketing that can be adopted in the tourism industry?

AI output: “Certainly! Sensory marketing is a powerful tool that can be effectively applied in the tourism industry to enhance the overall customer experience. Here are some proper strategies of sensory marketing that can be adopted in the tourism industry:

1. **Visual Stimulation:** Utilize visually appealing elements in your marketing materials, both online and offline. Use high-quality images and videos to showcase the natural beauty, attractions, and experiences available in the destination.
2. **Auditory Experience:** Incorporate carefully selected background music or ambient sounds that evoke positive emotions and create a sense of relaxation or excitement. For example, playing soothing music in a spa or lively tunes at a beach resort.
3. **Olfactory Enhancements:** Capitalize on scents to create a memorable and immersive experience. For instance, using pleasant fragrances in hotel lobbies, spas, or even in tour buses to evoke positive associations and enhance relaxation.
4. **Tactile Sensations:** Offer tactile experiences that engage tourists' sense of touch. This could include providing comfortable furnishings, luxurious fabrics, or interactive elements like touchscreens or tactile exhibits in museums or attractions.
5. **Gustatory Delights:** Highlight local culinary experiences and encourage tourists to indulge in the destination's unique flavors. Offering food and beverage tastings, organizing cooking classes, or recommending local restaurants can enhance the sensory experience.
6. **Multisensory Storytelling:** Craft narratives and experiences that engage multiple senses simultaneously. For instance, using multimedia presentations that combine visuals, sound, and tactile elements to immerse tourists in the destination's history or culture.
7. **Ambient Lighting:** Use lighting techniques to create specific moods and atmospheres. Soft lighting can evoke relaxation, while vibrant and colorful lighting can create excitement and energy.
8. **Personalization:** Tailor experiences to individual preferences and engage with tourists on a personal level. Collect data on their preferences and use it to customize their stay or suggest personalized itineraries based on their interests.
9. **Engage Local Culture:** Incorporate elements of the local culture, traditions, and rituals into the tourist experience. This can include traditional music performances, local art displays, or cultural festivals.
10. **Environmental Design:** Pay attention to the overall design of spaces and ensure they align with the desired sensory experience. Use elements like natural materials, soothing colors, and well-placed greenery to create a welcoming and relaxing ambiance.

Remember, the key is to create a harmonious and consistent sensory experience throughout the entire customer journey, from marketing and booking to the actual visit and beyond. By appealing to multiple senses, you can create a lasting impression and enhance the overall enjoyment and satisfaction of tourists.”

Source: <https://chat.openai.com/share/622c5015-5921-4633-94f1-79300b1e7ade>

Q3: In general, how can sensory marketing affect tourism behavior?

AI output: “Sensory marketing refers to the use of sensory stimuli to influence consumer behavior and enhance the overall customer experience. When applied to the tourism industry, sensory marketing can have a significant impact on tourists' behavior and their overall perception of a destination. Here are several ways in which sensory marketing can affect tourism behavior:

1. Emotional engagement: Sensory marketing creates emotional connections with tourists by appealing to their senses. By engaging multiple senses such as sight, sound, smell, taste, and touch, tourism businesses can create memorable experiences that evoke positive emotions and increase customer satisfaction. These emotional engagements can lead to repeat visits and positive word-of-mouth recommendations.
2. Perceived value: Sensory marketing can enhance tourists' perception of value by providing sensory cues that indicate quality and authenticity. For example, the smell of freshly brewed coffee at a hotel lobby or the sound of waves crashing on the beach can create a perception of luxury and relaxation, increasing the perceived value of the experience.
3. Memory and recall: Sensory stimuli have a strong influence on memory formation and recall. Tourism businesses can use sensory marketing to create unique and distinctive sensory cues associated with their brand or destination. These cues can help tourists remember their experiences more vividly and trigger positive memories, leading to a higher likelihood of revisiting or recommending the destination.
4. Differentiation and branding: Sensory marketing allows tourism businesses to differentiate themselves from competitors by creating a unique sensory experience. By carefully designing and managing the sensory elements of their offerings, businesses can establish a strong brand identity that sets them apart in the minds of tourists.
5. Behavioral influence: Sensory cues can have a direct impact on tourists' behavior. For example, the smell of freshly baked pastries in a café can stimulate appetite and encourage tourists to purchase food and beverages. Similarly, background music with a particular tempo can influence the pace at which tourists move through a retail space, potentially leading to increased sales.
6. Destination choice and satisfaction: Sensory marketing can play a role in destination selection by appealing to tourists' senses through marketing materials, advertisements, and online content. Additionally, the sensory experience at a destination can influence tourists' overall satisfaction. Pleasant sensory experiences can lead to positive evaluations of the destination and increase the likelihood of return visits.

Overall, sensory marketing in tourism can shape tourists' behavior by creating emotional engagement, enhancing perceived value, influencing memory and recall, differentiating brands, affecting behavior, and influencing destination choice and satisfaction. By understanding and leveraging the power of sensory stimuli, tourism businesses can create immersive and memorable experiences that positively impact tourists' behaviors and perceptions.”

Source: <https://chat.openai.com/share/b6b8c104-2415-43a6-8165-c21f8f89b456>

Q4: How can people with disabilities ideally experience ‘360o communication’ through sensory marketing?

AI output: “To enable people with disabilities to experience “360° communication” through sensory marketing, it's important to consider their specific needs and provide inclusive strategies. Here are some suggestions:

1. Multisensory Experiences: Incorporate multiple sensory elements in marketing campaigns to engage people with disabilities. Consider audio, visual, tactile, olfactory, and even taste-based stimuli to create a holistic experience.

2. **Accessible Formats:** Ensure that all communication materials are accessible and available in various formats. Provide alternative text for images, closed captions for videos, and audio descriptions for visually impaired individuals. Consider braille or tactile representations for those who are blind or have low vision.
3. **Assistive Technology Compatibility:** Ensure that your marketing content is compatible with assistive technologies commonly used by people with disabilities. For example, make sure your website is screen reader-friendly and supports keyboard navigation.
4. **Inclusive Language:** Use inclusive and person-first language in your marketing materials. Avoid stereotypes and stigmatizing language that may reinforce negative perceptions about disabilities.
5. **Universal Design Principles:** Apply universal design principles to your marketing campaigns. This approach focuses on creating products and experiences that can be used by the widest possible range of people, including those with disabilities. Consider the needs of individuals with different abilities from the initial design stages.
6. **Sensory Branding:** Develop a consistent sensory branding strategy to create a distinct identity for your brand. Consider how your brand can be recognized through non-visual cues such as sound, touch, or scent. This can help individuals with sensory impairments connect with your brand on a deeper level.
7. **Inclusive Advertising Imagery:** Feature diverse individuals, including people with disabilities, in your marketing materials. Ensure that they are represented in a positive and authentic manner. This helps to promote inclusivity and resonate with a wider audience.
8. **User Feedback and Co-creation:** Involve people with disabilities in the development and testing of your marketing campaigns. Seek their feedback to identify potential barriers and areas for improvement. Co-creation ensures that your strategies align with the needs and preferences of the target audience.
9. **Training and Sensitization:** Educate your staff about disability etiquette and awareness to foster a more inclusive and welcoming environment. Ensure that your employees understand the importance of inclusivity and how to effectively communicate with people with disabilities.
10. **Collaboration with Disability Organizations:** Partner with disability organizations or advocacy groups to gain insights and feedback. They can provide valuable guidance on inclusive marketing practices and help you reach a wider audience.

Remember, inclusivity in sensory marketing requires an ongoing commitment to understanding and addressing the needs of people with disabilities. By adopting these strategies, you can create meaningful experiences that engage and empower individuals with different abilities.”

Source: <https://chat.openai.com/share/44c418d2-b242-4883-9f30-7efcca88333c>

Q5: What possible functional and emotional advantages of sensory marketing experience could there be for a traveler with special needs?

AI output: “For a traveler with special needs, sensory marketing experiences can offer several functional and emotional advantages. Here are some possible benefits:

1. **Inclusivity:** Sensory marketing experiences that are designed to cater to individuals with special needs promote inclusivity. By considering diverse sensory preferences and requirements, such experiences ensure that travelers with disabilities can fully participate and enjoy their journey.
2. **Accessibility:** Sensory marketing experiences can enhance accessibility for travelers with special needs. For example, tactile or multisensory displays can provide information in alternative formats, making it easier for individuals with visual impairments to understand and navigate their surroundings.
3. **Sensory Stimulation:** Sensory marketing experiences can provide unique sensory stimulation that engages travelers with special needs. By incorporating elements like ambient sounds, aromas, or tactile interactions, these experiences can create a more immersive and memorable environment, enhancing the overall travel experience.
4. **Emotional Connection:** Sensory marketing experiences have the potential to evoke emotional responses in travelers with special needs. By leveraging sensory cues and creating positive sensory

associations, such as soothing music, comforting scents, or visually appealing displays, these experiences can evoke feelings of relaxation, joy, or excitement, enhancing emotional well-being.

5. **Sensory Education:** Sensory marketing experiences can also serve as educational tools, helping travelers with special needs develop and refine their sensory skills. For instance, interactive exhibits or guided sensory tours can offer opportunities to explore and understand different sensory stimuli, contributing to sensory integration and sensory processing development.
6. **Empowerment and Independence:** Well-designed sensory marketing experiences can empower travelers with special needs and promote their independence. By providing clear and consistent sensory cues, such as visual signage or audio prompts, individuals can navigate unfamiliar environments more confidently, reducing anxiety and reliance on others.
7. **Social Interaction:** Sensory marketing experiences can create opportunities for social interaction and connection among travelers with special needs. Shared sensory experiences, such as group activities or interactive installations, can facilitate communication, engagement, and the formation of social bonds with fellow travelers.

It is worth noting that the advantages may vary depending on the specific needs and preferences of the traveler, as everyone's sensory experiences and requirements are unique. Therefore, it is essential for sensory marketing experiences to be flexible, adaptable, and tailored to individual needs to ensure maximum benefit and inclusivity.”

Source: <https://chat.openai.com/share/393c6e07-645c-415a-8592-e940b434a9d1>

2.2. Opportunities of adopting AI applications in sensory marketing for accessible tourism

Q6: What prospects exist for adopting AI tools (e.g., ChatGPT) in sensory marketing for accessible travel for people with disabilities?

AI output: “AI tools, such as ChatGPT, offer promising prospects for adopting sensory marketing in accessible travel for people with disabilities. Here are some ways in which AI tools can enhance the sensory marketing experience for individuals with disabilities:

1. **Personalized Communication:** AI-powered chatbots can provide personalized assistance and information tailored to the specific needs of travelers with disabilities. By understanding their preferences, requirements, and limitations, AI tools can offer relevant recommendations and suggestions to make their travel experience more accessible and enjoyable.
2. **Multimodal Interaction:** AI can facilitate multimodal interaction, accommodating individuals with various disabilities. For instance, chatbots can integrate speech recognition and text-to-speech capabilities to assist individuals with visual impairments or those who prefer auditory communication. Additionally, AI tools can support alternative input methods like gestures or haptic feedback for users with mobility impairments.
3. **Real-Time Accessibility Information:** AI tools can gather and provide real-time accessibility information to travelers with disabilities. Chatbots can deliver up-to-date details about the accessibility of transportation, accommodations, attractions, and facilities, such as wheelchair accessibility, availability of assistive devices, or the presence of sensory-friendly environments.
4. **Virtual Tours and Simulations:** AI can enable immersive virtual tours and simulations, allowing individuals with disabilities to experience destinations before their actual visit. Through virtual reality (VR) or augmented reality (AR) technologies, AI tools can create realistic environments, helping users assess the accessibility and sensory aspects of different locations.
5. **Sensory Recommendations:** AI can assist in recommending sensory experiences that align with an individual's preferences and sensitivities. For instance, AI tools can suggest sensory-friendly attractions, hotels, or restaurants based on personalized profiles, taking into account factors like noise levels, lighting conditions, and other sensory stimuli.

6. **Language Translation and Assistance:** AI-powered translation services can bridge communication barriers for individuals with hearing impairments or those who do not speak the local language. AI tools can facilitate real-time translation between different languages, allowing travelers to communicate their needs and preferences effectively.
7. **Feedback and Improvement:** AI tools can collect feedback from travelers with disabilities to enhance the accessibility and sensory experience of future visitors. By analyzing data and user insights, AI can identify areas for improvement and inform businesses and service providers about necessary modifications to enhance accessibility.

However, it's important to note that AI tools should not replace human interaction and expertise in the accessible travel industry. They should be used as complementary tools to augment and enhance the overall experience, ensuring inclusivity and accessibility for individuals with disabilities.”

Source: <https://chat.openai.com/share/ef75720f-1907-4262-9ba1-192b4ea38afc>

Q7: How can AI tools (e.g., ChatGPT), be leveraged in sensory marketing to enhance accessible tourism experiences for people with disabilities?

AI output: “AI tools like ChatGPT can be leveraged in sensory marketing to enhance accessible tourism experiences for people with disabilities in several ways:

1. **Personalized Recommendations:** AI can analyze user preferences, accessibility needs, and sensory sensitivities to provide personalized recommendations for accessible tourism experiences. ChatGPT can interact with users to gather information about their specific requirements, such as wheelchair accessibility, audio or visual impairments, and sensory preferences. Based on this information, the AI system can suggest suitable destinations, attractions, or accommodations that cater to their needs.
2. **Virtual Tours and Simulations:** AI-powered virtual reality (VR) or augmented reality (AR) experiences can simulate different sensory aspects of tourist destinations. For example, individuals with visual impairments can benefit from audio descriptions and haptic feedback to explore a virtual environment. Similarly, those with hearing impairments can experience visual simulations that represent soundscapes or use text-based interactions. ChatGPT can provide real-time assistance and information during these virtual tours, making them more engaging and informative.
3. **Sensory Feedback:** AI tools can provide sensory feedback to enhance the tourism experience for people with disabilities. For instance, tactile feedback devices or haptic wearables can be integrated with ChatGPT to deliver vibrations or gentle touches to simulate certain sensations. This can be useful for individuals with sensory impairments who want to experience tactile elements like textures, vibrations, or temperature variations.
4. **Real-Time Assistance:** ChatGPT can act as a virtual assistant during a person's travel experience, providing real-time information and support. It can answer questions about accessibility features at a specific location, provide directions based on wheelchair accessibility or sensory-friendly routes, and offer recommendations for nearby accessible amenities like restrooms or accessible dining options.
5. **Language and Communication Support:** AI language models like ChatGPT can assist in overcoming language barriers by providing translation services or facilitating communication between individuals with disabilities and local service providers. This can help people with disabilities feel more comfortable and confident when traveling to unfamiliar destinations.
6. **Accessibility Information Database:** AI can help create and maintain a comprehensive database of accessibility information for different tourist destinations. ChatGPT can access this database to provide up-to-date information about accessible accommodations, attractions, transportation options, and facilities. This allows users to make informed decisions and plan their trips with confidence.

It is important to note that while AI tools can enhance accessible tourism experiences, they should be seen as supportive tools and not as a replacement for human interaction and assistance. Collaboration between AI technologies and human experts in the field of accessible tourism is crucial to ensure a comprehensive and inclusive experience for people with disabilities.”

Source: <https://chat.openai.com/share/8633a791-aa7f-46ec-a30b-3c5965aee2fa>

Q8: Could you provide a list of AI applications that destination management organizations (DMOs) can utilize for sensory marketing to promote accessible travel for people with disabilities?

AI output: “Certainly! Here's a list of AI applications that destination management organizations (DMOs) can utilize for sensory marketing to promote accessible travel for people with disabilities:

1. Natural Language Processing (NLP): NLP can be used to analyze and understand feedback, reviews, and social media posts related to accessibility in travel destinations. DMOs can leverage NLP to identify areas where improvements can be made and gather insights to enhance accessibility.
2. Computer Vision: Computer vision technologies can aid in analyzing images and videos to assess the accessibility of travel destinations. By using AI algorithms, DMOs can automatically detect and evaluate accessibility features like ramps, accessible entrances, Braille signage, and wheelchair-friendly facilities.
3. Chatbots and Virtual Assistants: AI-powered chatbots and virtual assistants can provide instant responses to inquiries about accessible travel. DMOs can use them to answer common questions, provide information on accessible accommodations, transportation options, and recommend accessible attractions and activities.
4. Personalized Recommendations: AI algorithms can analyze user preferences and accessibility requirements to provide personalized travel recommendations. DMOs can leverage this technology to suggest destinations, accommodations, and activities that cater specifically to the needs of individuals with disabilities.
5. Augmented Reality (AR) and Virtual Reality (VR): AR and VR can simulate real-world experiences and enable individuals to virtually explore destinations before visiting. DMOs can create accessible virtual tours, allowing people with disabilities to assess the suitability of various travel destinations and experience them from the comfort of their homes.
6. Data Analytics: AI-powered data analytics can help DMOs identify patterns and trends in accessible travel preferences, behaviors, and demographics. By analyzing this data, DMOs can make data-driven decisions to improve accessibility and create targeted marketing campaigns.
7. Accessibility Apps: DMOs can develop or partner with accessibility-focused apps that utilize AI. These apps can provide real-time information on accessible facilities, attractions, transportation options, and navigation assistance for individuals with disabilities.
8. Speech Recognition: Speech recognition technology can be used to assist individuals with disabilities who have difficulty typing or interacting with digital interfaces. DMOs can integrate speech recognition features into their websites and applications to ensure accessibility for a broader range of users.
9. Sentiment Analysis: AI-powered sentiment analysis can help DMOs gauge public sentiment and identify any negative perceptions or challenges related to accessible travel. This information can guide DMOs in addressing concerns, improving services, and showcasing positive experiences of people with disabilities.
10. Accessibility Auditing: AI tools can assist in conducting accessibility audits of websites, mobile apps, and other digital assets. By automating the auditing process, DMOs can ensure their digital presence adheres to accessibility standards, benefiting individuals with disabilities.

These AI applications can help DMOs enhance the promotion of accessible travel, provide personalized experiences, and improve the overall accessibility of destinations for people with disabilities.”

Source: <https://chat.openai.com/share/f6486b88-011b-49d7-aa86-99340f0a9752>

Q9: Could you create a sensory marketing mix for accessible tourism?

AI output: “Certainly! Here's a sensory marketing mix for accessible tourism, taking into consideration the different senses and their impact on creating a memorable and inclusive experience for tourists with diverse accessibility needs:

1. Sight:

- Ensure clear signage and wayfinding throughout the tourism destination, including large, legible fonts and high color contrast for better visibility.
 - Implement visual aids such as maps, pictograms, and diagrams that assist visitors in navigating the area.
 - Showcase vibrant and visually appealing displays of local culture, heritage, and attractions.
2. Sound:
- Provide an auditory environment that is welcoming and inclusive, avoiding excessive noise levels.
 - Offer audio guides or narrated tours for visitors with visual impairments, providing detailed descriptions of the surroundings and attractions.
 - Consider installing hearing loops or assistive listening devices to enhance the audio experience for individuals with hearing impairments.
3. Touch:
- Design accessible pathways and walkways that are smooth, well-maintained, and free from physical barriers.
 - Provide tactile maps and models that allow visitors with visual impairments to explore and understand the layout of the destination.
 - Incorporate tactile elements into exhibits or displays to engage visitors' sense of touch and create a multi-sensory experience.
4. Taste:
- Promote local cuisine and food experiences that cater to different dietary requirements and preferences, including options for individuals with allergies or specific dietary restrictions.
 - Offer accessible dining areas and seating arrangements that accommodate wheelchair users and individuals with mobility limitations.
 - Organize food tastings or culinary events that allow tourists to savor the flavors and specialties of the region.
5. Smell:
- Utilize pleasant scents in common areas or attractions to create a welcoming and immersive atmosphere.
 - Promote local fragrances, such as those associated with nature, flowers, or local produce, to evoke a sense of place and enhance the overall experience.
 - Ensure that scents are not overpowering or triggering for individuals with sensitivities or allergies.
6. Multi-sensory Experiences:
- Create interactive exhibits or attractions that engage multiple senses simultaneously, providing a more inclusive experience for all visitors.
 - Incorporate audio descriptions, tactile elements, and sensory cues into guided tours or immersive experiences to cater to individuals with different sensory needs.
 - Consider the integration of assistive technologies, such as augmented reality or virtual reality, to provide inclusive and accessible experiences.

Remember that the key to an effective sensory marketing mix for accessible tourism is to understand and accommodate the diverse needs of your target audience. Regular feedback and engagement with individuals with disabilities can help refine and improve the sensory experiences provided.”

Source: <https://chat.openai.com/share/a70bdaca-c3c0-4a00-8cc1-d33ea625c1cc>

Q10: Could you compare in a table how can AI-powered systems suggest tailored activities, accommodations, and attractions that cater to tourists with hearing impairments and visual impairments?

AI output: “Certainly! Here's a table comparing how AI-powered systems can suggest tailored activities, accommodations, and attractions for tourists with hearing impairments and visual impairments:

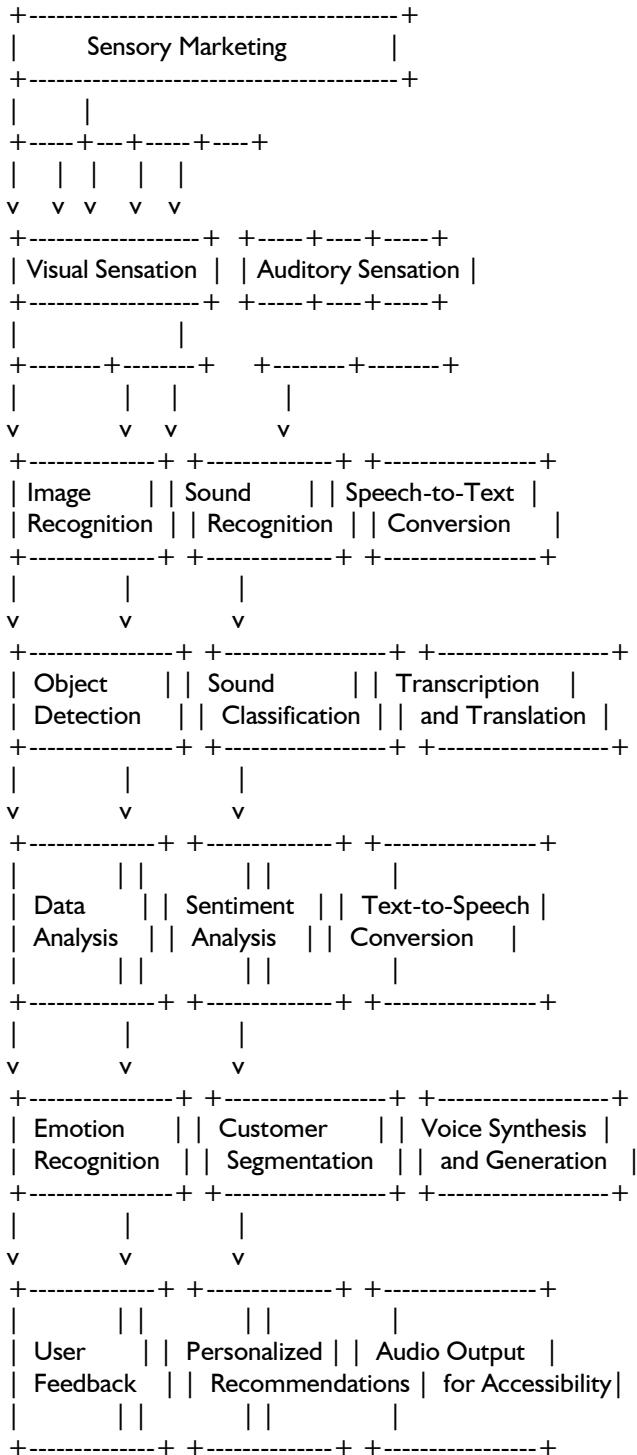
Feature	Hearing Impairments	Visual Impairments
Description	AI systems can suggest activities, accommodations, and attractions that consider the needs of individuals with hearing impairments.	AI systems can suggest activities, accommodations, and attractions that consider the needs of individuals with visual impairments.
Communication Enhancement	Utilize speech-to-text capabilities to transcribe audio information into text, enabling individuals to read and understand information.	Utilize text-to-speech capabilities to convert text-based information into speech, providing auditory descriptions of relevant details.
Sign Language Interpretation	Employ machine learning to interpret and translate spoken language into sign language, facilitating communication with hearing-impaired individuals.	Provide audio descriptions of surroundings, exhibits, or attractions using pre-recorded or synthesized voiceovers, enhancing the experience for visually impaired individuals.
Captioning and Subtitles	Generate real-time captions or subtitles for videos, live events, or audio content, allowing individuals to follow along and comprehend the information.	Enable audio descriptions or audio-narration tracks for videos, describing visual elements and actions, enriching the experience for visually impaired individuals.
Vibratory Alerts	Incorporate wearable devices that produce vibrations or haptic feedback to notify individuals with hearing impairments about relevant information or alerts.	Integrate navigation systems or wearable devices that provide haptic feedback or vibrations to guide visually impaired individuals in unfamiliar environments.
Location-based Services	Use geolocation data and mapping services to recommend accessible places, including hotels, restaurants, and attractions, with features suitable for individuals with hearing impairments.	Utilize location-based services to recommend accessible places that provide features like braille signage, tactile maps, or auditory cues for individuals with visual impairments.
User Preferences and Profiles	Incorporate personalization by allowing users to specify their preferences, such as closed captions, sign language availability, or hearing loops, to tailor recommendations accordingly.	Enable users to customize their preferences, including audio descriptions, navigation speed, or high-contrast interfaces, to receive personalized recommendations based on their needs.
Feedback and Reviews	Encourage users to provide feedback and reviews related to accessibility features, allowing the system to continuously improve recommendations and accommodate evolving needs.	Collect and analyze feedback from visually impaired users to enhance the quality of audio descriptions, navigation instructions, or tactile elements in attractions, ensuring better accessibility over time.
Integration with Assistive Technologies	Integrate with existing assistive technologies like hearing aids, cochlear implants, or loop systems to enhance the overall experience and compatibility for individuals with hearing impairments.	Collaborate with assistive technologies like screen readers, braille displays, or tactile interfaces to seamlessly deliver information and instructions to visually impaired individuals.

These are some ways AI-powered systems can suggest tailored activities, accommodations, and attractions for tourists with hearing impairments and visual impairments. Depending on the specific implementation and advancements in technology, additional features and capabilities may be available to further enhance accessibility for these individuals.”

Source: <https://chat.openai.com/share/f547c21d-e2f1-4f48-91b9-f24292fe21dc>

Q11: Could you design a figure including AI tools that can adopted in sensory marketing for accessible tourism?

AI output: “Certainly! Here’s a figure that illustrates the integration of AI tools in sensory marketing for accessible tourism:



Let's break down the components of the figure:

- **Sensory Marketing:** The overarching concept of using sensory stimuli to engage and evoke emotions in consumers.
- **Visual Sensation:** Visual stimuli and experiences.
- **Auditory Sensation:** Auditory stimuli and experiences.
- **Image Recognition:** AI tool that identifies and classifies objects within images.
- **Sound Recognition:** AI tool that analyzes and recognizes sounds.
- **Speech-to-Text Conversion:** AI tool that converts spoken language into written text.
- **Object Detection:** AI tool that detects and identifies specific objects within images.
- **Sound Classification:** AI tool that classifies different types of sounds.
- **Transcription and Translation:** AI tool that transcribes spoken language into text and translates it into different languages.
- **Data Analysis:** AI tool that analyzes and extracts insights from data.
- **Sentiment Analysis:** AI tool that determines the sentiment expressed in text or speech.
- **Text-to-Speech Conversion:** AI tool that converts written text into spoken language.
- **Emotion Recognition:** AI tool that detects and analyzes emotions expressed by individuals.
- **Customer Segmentation:** AI tool that categorizes customers into specific segments based on various criteria.
- **Voice Synthesis and Generation:**

Source: <https://chat.openai.com/share/cd5d0fb5-f05c-4919-ad8c-b5ed3af6b2b8>

2.3. Challenges of adopting AI tools (e.g., ChatGPT) in sensory marketing for accessible tourism

Q12: What are the key challenges of adopting AI technologies (e.g., ChatGPT) in sensory marketing for accessible travel for people with disabilities?

AI output: “Adopting AI technologies, such as ChatGPT, in sensory marketing for accessible travel for people with disabilities can bring numerous benefits. However, there are several key challenges that need to be considered:

1. **Lack of Data:** AI models like ChatGPT require substantial amounts of data for training and fine-tuning. When it comes to sensory marketing for accessible travel, there may be limited datasets specifically tailored to people with disabilities. Obtaining diverse and comprehensive data that represents the sensory experiences and preferences of individuals with different disabilities can be challenging.
2. **Bias and Inclusion:** Bias in AI systems can lead to discriminatory outcomes. When developing AI technologies for accessible travel, it is crucial to ensure that the datasets used for training are diverse, inclusive, and representative of people with disabilities. Failure to account for the full spectrum of disabilities and individual needs can result in exclusionary or ineffective solutions.
3. **Understanding Individual Needs:** Disabilities vary greatly, and individuals may have specific sensory preferences or sensitivities. An AI system like ChatGPT needs to be able to understand and adapt to the unique requirements of each user. Customization and personalization become vital to provide a meaningful and inclusive sensory experience for travelers with disabilities.
4. **Accessibility and Usability:** Accessibility considerations are crucial when designing AI technologies for people with disabilities. The user interface and interaction with the AI system should be accessible to individuals with various disabilities, including those with visual, auditory, or motor impairments. Ensuring compatibility with assistive technologies and adherence to accessibility standards is essential.
5. **Ethical Use of AI:** Implementing AI in sensory marketing should prioritize ethical considerations. It is important to obtain informed consent from individuals when collecting and using their data. Additionally, clear privacy policies should be in place to protect user information and prevent any misuse of personal data.
6. **Trust and Reliability:** Establishing trust in AI technologies is critical, particularly when catering to individuals with disabilities. Users need to feel confident that the AI system can provide accurate and

reliable information regarding accessible travel options. Transparency about how the AI system works and addressing any concerns related to privacy and security can help build trust.

7. **Human Augmentation:** While AI can enhance sensory marketing efforts, it is crucial to strike the right balance between automation and human interaction. Some individuals with disabilities may require human assistance and personalized support that goes beyond what an AI system can provide. Augmenting human capabilities with AI technology can lead to more effective and empathetic experiences.

Addressing these challenges requires collaboration between AI developers, accessibility experts, people with disabilities, and relevant stakeholders. By prioritizing inclusivity, user-centered design, and ethical considerations, AI technologies can contribute to creating more accessible and tailored sensory marketing experiences for people with disabilities in the travel industry.”

Source: <https://chat.openai.com/share/eff672f8-98bf-4adb-890b-7676d3f8717a>

Q13: Could you group, in a table, the main challenges associated with adopting AI tools (e.g., ChatGPT) in sensory marketing for accessible travel for people with disabilities?

AI output: “Certainly! Here's a table grouping the main challenges associated with adopting AI tools, such as ChatGPT, in sensory marketing for accessible travel for people with disabilities:

Challenges	Description
1. Data Bias	AI models like ChatGPT learn from data, which can introduce biases. If the training data doesn't adequately represent the diversity of people with disabilities, the AI tool may struggle to understand and cater to their specific needs, leading to less effective sensory marketing.
2. Lack of Accessibility Expertise	Developing AI tools for accessible travel requires a deep understanding of the unique challenges faced by people with disabilities. Without input from accessibility experts, AI solutions may not adequately address their needs or preferences, hindering effective sensory marketing efforts.
3. Natural Language Processing Limitations	AI models like ChatGPT rely on natural language processing to understand and respond to user inputs. However, people with disabilities may use different communication styles or assistive technologies, which can pose challenges for the AI tool to comprehend and generate appropriate responses.
4. Lack of Personalization	Effective sensory marketing requires personalized experiences. However, AI tools may struggle to tailor their responses to individuals with disabilities due to limited data or the inability to capture nuanced preferences and requirements.
5. Ethical Considerations	Using AI tools in sensory marketing raises ethical concerns. For example, privacy and data security must be ensured when handling personal information related to disabilities. Additionally, there is a need to prevent the AI tool from inadvertently providing incorrect or misleading information that could harm individuals with disabilities.
6. Technical Limitations	AI tools may face technical limitations in processing complex sensory information, such as interpreting images or sounds, which are crucial for sensory marketing. Overcoming these limitations and developing AI models capable of understanding and leveraging sensory inputs can be a significant challenge.
7. Integration and Compatibility	Integrating AI tools like ChatGPT into existing systems or platforms used for sensory marketing may pose compatibility challenges. Ensuring seamless integration, compatibility with assistive technologies, and accessibility across different devices and platforms can be complex and require additional resources.

It's important to note that these challenges are not exhaustive, and there may be other specific obstacles based on the context of implementing AI tools in sensory marketing for accessible travel.”

Source: <https://chat.openai.com/share/f369fe42-35c2-420a-935d-b1371bee23a6>

Q14: Could you make a graphic depicting the costs associated with using AI technologies (e.g., ChatGPT) in sensory marketing for accessible travel for people with disabilities?

AI output: “As a text-based AI, I'm unable to directly create or display graphics. However, I can help you outline the costs associated with using AI technologies in sensory marketing for accessible travel for people with disabilities. You can use this information to create your own graphic representation.

Costs associated with using AI technologies in sensory marketing for accessible travel for people with disabilities can vary depending on several factors. Here are some potential cost considerations:

1. **Development Costs:** These include the expenses related to developing and customizing AI technologies specifically for sensory marketing in accessible travel. This may involve hiring AI developers or partnering with AI companies.
2. **Data Acquisition Costs:** AI systems require vast amounts of data to train and improve their performance. Collecting and curating relevant data related to accessible travel for people with disabilities may involve additional costs, such as data licensing or data acquisition from specialized sources.
3. **Training Costs:** Training AI models, such as ChatGPT, requires computational resources. The cost of training can vary depending on the complexity of the model and the amount of data used for training. Consideration should be given to the time and computational resources required for training and fine-tuning the model.
4. **Infrastructure Costs:** Deploying AI technologies typically involves setting up the necessary infrastructure to run the system effectively. This may include servers, cloud computing resources, storage, and networking, which can contribute to the overall cost.
5. **Maintenance and Updates:** AI models need ongoing maintenance and updates to ensure they remain accurate, reliable, and up to date. This may include monitoring the system's performance, bug fixing, and incorporating new data or features. Maintenance costs should be factored into the long-term budget.
6. **Integration Costs:** Integrating AI technologies with existing systems, platforms, or websites can involve additional expenses. This could include development efforts to connect the AI solution with booking platforms, travel apps, or sensory marketing tools.
7. **User Support Costs:** Providing support to users who interact with the AI system may require allocating resources for customer service or technical support. Addressing user queries, feedback, or troubleshooting issues should be considered when assessing the overall costs.

It's important to note that the specific costs associated with using AI technologies in sensory marketing for accessible travel can vary depending on the scope and scale of the project, the chosen AI solution, and the unique requirements of the target audience.”

Source: <https://chat.openai.com/share/94451283-1622-406f-8876-50bb484be204>

Q15: What are the potential ethical considerations associated with using AI tools (e.g., ChatGPT) in sensory marketing for accessible tourism?

AI output: “When using AI tools like ChatGPT in sensory marketing for accessible tourism, there are several potential ethical considerations to take into account. Here are some key points to consider:

1. **Accessibility and Inclusivity:** While AI tools can enhance the sensory experience for tourists, it's important to ensure that these tools are accessible to all individuals, including those with disabilities. Considerations should be made for providing alternative formats or accommodating different sensory needs to ensure inclusivity.
2. **Privacy and Data Protection:** AI tools often rely on collecting and analyzing personal data to provide personalized experiences. It's crucial to handle user data ethically, following data protection regulations and obtaining informed consent from users. Users should have control over their data and be informed about how it will be used.

3. **Transparency and Disclosure:** When AI tools are used in sensory marketing, it may not always be apparent to users that they are interacting with an AI system. Transparency about the AI nature of the tool and clearly disclosing when users are interacting with an AI can help establish trust and manage expectations.
4. **Accuracy and Bias:** AI systems are trained on vast amounts of data, and biases present in the training data can be reflected in their outputs. It's important to ensure that AI tools used in sensory marketing provide accurate and unbiased information, especially when it comes to promoting accessible tourism. Regular auditing and monitoring of AI systems can help identify and mitigate biases.
5. **Psychological Impact:** Sensory marketing techniques aim to evoke emotional responses and influence consumer behavior. The use of AI tools should be mindful of the potential psychological impact on individuals, especially when targeting vulnerable groups. Care should be taken to avoid manipulative or deceptive practices.
6. **Human Oversight and Accountability:** AI tools should not operate autonomously without human oversight. Human experts should be involved in the development, monitoring, and decision-making processes to ensure that the AI systems align with ethical standards and address potential biases or issues that may arise.
7. **Cultural Sensitivity:** In the context of accessible tourism, AI tools should be sensitive to diverse cultural perspectives and avoid perpetuating stereotypes or engaging in cultural appropriation. Considerations should be made to adapt the AI's behavior, content, and recommendations to align with the cultural values and norms of the target audience.

These are just a few examples of the ethical considerations associated with using AI tools like ChatGPT in sensory marketing for accessible tourism. It's important to approach the use of AI in this domain with a critical and responsible mindset to ensure a positive and inclusive experience for all users.”

Source: <https://chat.openai.com/share/3d0e6bee-e4ab-4903-808a-5d3deb052e2a>

Q16: How can AI tools (e.g., ChatGPT) assist in overcoming sensory barriers and providing inclusive experiences for individuals with disabilities in the tourism industry?

AI output: “AI tools like ChatGPT can play a significant role in overcoming sensory barriers and providing inclusive experiences for individuals with disabilities in the tourism industry. Here are several ways in which AI tools can assist:

1. **Text-based Communication:** AI tools can facilitate text-based communication, allowing individuals with hearing impairments to interact effectively with tourism providers. By using chatbots or text-based interfaces, individuals can communicate their needs, ask questions, and receive information in a way that suits their abilities.
2. **Visual Descriptions:** AI can generate visual descriptions for individuals with visual impairments. By analyzing images or videos, AI algorithms can provide detailed textual descriptions of scenes, landmarks, or attractions. These descriptions can be conveyed through text-to-speech systems or alternative accessible formats, enabling visually impaired individuals to understand and visualize their surroundings.
3. **Navigation and Wayfinding:** AI-powered navigation tools can help individuals with mobility or visual impairments navigate through unfamiliar environments. AI algorithms can provide step-by-step directions, suggest accessible routes, and offer real-time updates on nearby amenities or obstacles. By integrating with mobile devices or wearable technology, these tools can provide personalized guidance, enhancing independent travel experiences.
4. **Language Translation and Interpretation:** AI language models can aid in overcoming language barriers by providing translation services. Individuals with hearing impairments can use speech-to-text functionalities to understand spoken languages, while those with speech impairments can benefit from text-to-speech capabilities to communicate with individuals who speak different languages.

5. **Personalized Recommendations:** AI algorithms can analyze user preferences and past interactions to provide personalized recommendations for accessible tourist destinations, accommodations, restaurants, and activities. By considering specific accessibility needs, such as wheelchair accessibility or sensory-friendly environments, AI tools can help individuals with disabilities make informed choices and plan their trips accordingly.
6. **Virtual Reality (VR) and Augmented Reality (AR):** AI-powered VR and AR applications can simulate real-world experiences, allowing individuals with disabilities to virtually explore destinations and attractions. This technology can provide a rich and immersive experience, helping individuals with physical or sensory limitations to access places they may not be able to visit physically.
7. **Accessibility Audits:** AI tools can assist tourism providers in conducting accessibility audits of their facilities and services. By analyzing data and user feedback, AI algorithms can identify areas for improvement, suggest accessibility modifications, and ensure compliance with accessibility standards and regulations.

It's important to note that while AI tools can enhance accessibility and inclusion in the tourism industry, they should be used in conjunction with human support and expertise to address unique needs and provide a holistic experience for individuals with disabilities.”

Source: <https://chat.openai.com/share/7c440701-192f-4570-b7ee-3564d701dc85>

2.4. Practical guidelines of adopting AI tools in sensory marketing for accessible tourism

Q17: Could you briefly explain how to raise awareness and support the adoption of AI tools, (e.g., ChatGPT), in sensory marketing for accessible tourism among people with disabilities as well as concerned stakeholders?

AI output: “Raising awareness and support for the adoption of AI tools, such as ChatGPT, in sensory marketing for accessible tourism among people with disabilities and stakeholders can be done through a strategic approach. Here are some steps you can follow:

1. **Identify the target audience:** Determine the specific groups of people with disabilities and stakeholders who would benefit from and be interested in AI tools in sensory marketing for accessible tourism. This may include individuals with visual impairments, hearing impairments, mobility limitations, or cognitive disabilities, as well as organizations and individuals involved in the tourism industry.
2. **Understand the needs and concerns:** Conduct research and engage with the target audience to gain a thorough understanding of their needs, challenges, and concerns related to accessible tourism. This will help you tailor your messaging and approach to address their specific requirements.
3. **Educate and demonstrate benefits:** Develop educational materials, presentations, and demonstrations to showcase the benefits of AI tools like ChatGPT in sensory marketing for accessible tourism. Highlight how these tools can enhance the overall travel experience for people with disabilities, such as providing personalized recommendations, real-time assistance, and accessible information.
4. **Collaborate with stakeholders:** Engage with stakeholders such as disability rights organizations, accessible tourism advocacy groups, travel agencies, and tour operators. Collaborate with them to create partnerships and initiatives that promote the adoption of AI tools for accessible tourism. Seek their endorsement and support in spreading the message.
5. **Utilize multiple channels:** Utilize various communication channels to reach your target audience and stakeholders effectively. This may include social media platforms, websites, blogs, email newsletters, online forums, and traditional media channels. Tailor your messages to each channel and utilize compelling visuals and personal stories to grab attention and generate interest.
6. **Provide training and resources:** Offer training sessions, webinars, or workshops to stakeholders in the tourism industry to demonstrate the use of AI tools and their integration into existing marketing strategies. Provide resources such as guidelines, case studies, and best practices to help stakeholders implement and leverage these tools effectively.

7. Foster inclusive partnerships: Encourage collaboration between AI developers, marketers, tourism businesses, and people with disabilities to create inclusive solutions. Foster an environment where feedback and suggestions are welcomed and iterate on the tools based on the input received.
8. Monitor and evaluate impact: Continuously monitor the impact of your awareness-raising efforts. Collect feedback, conduct surveys, and track adoption rates of AI tools in sensory marketing for accessible tourism. Use this data to refine your approach, identify challenges, and celebrate success stories.

Remember, raising awareness and support is an ongoing process. It requires consistent effort, engagement, and collaboration with the target audience and stakeholders to ensure that AI tools like ChatGPT are effectively utilized in sensory marketing for accessible tourism.”

Source: <https://chat.openai.com/share/c3ae7d7a-cecc-41cf-8200-630b6f5b9230>

Q18: How can the user interface and experience be improved to make AI tools in sensory marketing, (e.g., ChatGPT), accessible and useful for those with disabilities?

AI output: “Improving the user interface and experience of AI tools in sensory marketing to make them accessible and useful for people with disabilities is an important goal. Here are some suggestions on how to achieve that:

1. Adhere to accessibility guidelines: Ensure that the AI tool's user interface complies with established accessibility guidelines, such as the Web Content Accessibility Guidelines (WCAG). This includes providing alternative text for images, using clear and consistent navigation, and implementing proper keyboard accessibility.
2. Support multiple input methods: Accommodate a variety of input methods to cater to users with different abilities. For example, provide options for keyboard navigation, voice commands, and assistive devices like screen readers or braille displays. Allow users to customize the input method based on their needs.
3. Provide alternative sensory outputs: Consider different sensory modalities for presenting information. While text-based outputs are common, explore options for providing audio descriptions or alternative formats such as haptic feedback or vibrations for users with visual impairments or hearing impairments.
4. Ensure clear and concise language: Use plain language and avoid jargon or complex terminology. This helps users with cognitive disabilities or language barriers to understand and interact with the AI tool more effectively. Provide explanations and context when presenting results or recommendations.
5. Offer customization and personalization: Allow users to customize the AI tool's interface and settings to suit their individual needs and preferences. This could include options for adjusting font size, color contrast, speech rate, or using high-contrast themes. Personalization enhances the user experience for individuals with specific accessibility requirements.
6. Provide clear feedback and error handling: Ensure that the AI tool provides clear and understandable feedback to users. Highlight errors or issues in a way that is easy to identify and address. Use error messages that explain the problem and suggest solutions to assist users in resolving any issues they encounter.
7. Conduct user testing and gather feedback: Involve people with disabilities in the design and testing process to get valuable insights and feedback. Engage with disability advocacy groups or accessibility experts who can provide guidance on potential improvements. Actively listen to user feedback and iterate on the interface and user experience based on their needs.
8. Include comprehensive documentation and support: Provide accessible documentation and support materials that explain how to use the AI tool effectively. This documentation should be available in multiple formats, such as plain text, audio, or video, to cater to various accessibility needs.
9. Continuously improve and iterate: Accessibility is an ongoing process. Regularly assess and update the AI tool based on user feedback and advancements in accessibility standards. Stay informed about emerging technologies and practices that can further enhance the accessibility of the tool.

By incorporating these strategies, AI tools in sensory marketing, like ChatGPT, can become more accessible and useful for people with disabilities, enabling a more inclusive user experience.”

Source: <https://chat.openai.com/share/1f1e3784-8f44-4ae8-b9e4-13639fa55410>

Q19: In accessible tourism, how might AI applications (e.g., ChatGPT) be tailored to match the specific sensory preferences and needs of tourists with disabilities?

AI output: “In accessible tourism, AI applications like ChatGPT can be tailored to match the specific sensory preferences and needs of tourists with disabilities in several ways. Here are a few examples:

1. Customization of communication: AI applications can be programmed to adapt their communication style and output to match the sensory preferences of individuals with disabilities. For instance, for visually impaired tourists, the AI can provide information through text-to-speech capabilities or through compatible braille devices. Similarly, for hearing-impaired tourists, the AI can offer visual cues or communicate through text-based interfaces.
2. Multimodal interaction: AI applications can incorporate multiple modes of interaction to accommodate different sensory needs. For instance, they can support text-based chat, voice commands, and even gesture or touch-based interfaces. This flexibility allows users with diverse disabilities to interact with the AI in a way that suits their individual sensory capabilities.
3. Accessibility information provision: AI applications can provide real-time accessibility information about destinations, attractions, and accommodations. For example, they can offer detailed descriptions of accessibility features, such as wheelchair accessibility, presence of tactile paths, availability of audio guides, and other relevant information that helps tourists make informed decisions.
4. Personalized recommendations: AI applications can leverage user preferences and accessibility requirements to offer personalized recommendations. By considering factors such as accessibility features, mobility constraints, dietary restrictions, and sensory preferences, the AI can suggest suitable destinations, attractions, and activities that cater to the specific needs of individuals with disabilities.
5. Navigation assistance: AI applications can provide navigation assistance tailored to the sensory needs of tourists with disabilities. They can offer step-by-step directions, audio cues, or haptic feedback to guide individuals with visual impairments or those with mobility challenges. By integrating with GPS and mapping technologies, the AI can help users navigate unfamiliar environments confidently.
6. Translation and interpretation: AI-powered translation and interpretation capabilities can assist tourists who have communication difficulties due to language barriers or hearing impairments. The AI can translate spoken or written language in real-time, facilitate communication between tourists and locals, and ensure effective interactions during their travel experience.

It is important to note that while AI applications can be valuable tools for enhancing accessibility in tourism, they should be designed in collaboration with individuals with disabilities and follow accessibility guidelines to ensure they meet the specific needs of the user community.”

Source: <https://chat.openai.com/share/4d0a3283-5bd6-4a51-8c30-5d9f28e089dc>

3. Discussion and conclusion

In recent years, digital technologies are being used more often across a variety of settings (Jaboob. et al., 2023), including the tourism and travel industry (Ivanov & Webster, 2019; Stienmetz et al., 2022). In this respect, using different multisensory digital technologies in tourism marketing may motivate people to be more attracted to visit tourist destinations that have incorporated technological advancements to facilitate communications for all tourists including tourists with disabilities. The responses generated by ChatGPT related to Q1 and Q2 indicated that different AI applications are used to ensure that all communication facilities are readily accessible. These results are aligned with prior research examining the impact of adopting sensory-associated advertising of tourist destinations on behavioral intention to visit (Wei et al., 2022). They also support the claim that destination image involves multiple senses (e.g., visual, audio, olfactory, gustatory, and tactile) and should be observed as a complementary marketing tool rather than the traditional one (Stăncioiu et al., 2014). The ChatGPT’s response

to Q3 indicated that sensory marketing has the power to directly affect visitor behavior and attitude, leading to the spread of favorable word-of-mouth recommendations for tourist destinations. This finding is consistent with the results by Mathew and Soliman (2021) revealing that digital content marketing has a remarkable impact on tourism consumer behavior. It also supports the grounded cognition theory in sensory marketing (e.g., Krishna, 2011) by explaining how sensory marketing could create a memorable experience that could affect tourists' overall satisfaction and destination choice. This finding also confirms the results of prior research highlighting that sensory reference could significantly influence visitor emotions by spreading positive word-of-mouth and willingness to visit destinations (Ghosh & Sarkar, 2016). The ChatGPT's response to Q4 and Q5 expressed how people with disabilities experience communication through sensory marketing. For example, individuals with visual impairments can access materials through braille or tactile representations catering to those with low vision. Also, companies can provide advertisements using a non-visual medium. The ChatGPT-generated responses are in line with the findings of McKercher and Darcy (2018) who conducted a study to create a comprehensive experience for people with disabilities and demonstrated some barriers faced by these people such as attitudinal biases, physical limitations, and insufficient access to pertinent information. In addition, these responses support the findings by Ruusunen et al. (2023) and Alyahya and McLean (2022) that AI affects visitors' experiences about their tourist destinations by boosting their mental images, sense of involvement in the experience, and attitudes and travel intentions to a certain destination.

Regarding the opportunities of adopting AI applications in sensory marketing for accessible tourism, ChatGPT's responses to Q6 and Q7 indicated that tourist destinations can power the advancement of AI in the domain of sensory marketing for accessible tourism. This opens the opportunities for various AI technologies to not only benefit normal tourists but also cater to the needs of tourists with disabilities. Since everyone has unique preferences, ChatGPT can guide tourists to the preferred communication application for each tourist including people with disabilities. These results support prior research indicating that smart applications using AI can provide speech recognition for visual impairment or text-to-speech to those who prefer audio communication (e.g., Abhishek et al., 2022). These smart apps can be easily accessed by people with disabilities using smartphones. Moreover, AI enables a comprehensive experience of a destination through VR allowing individuals to explore and engage with the place before physically visiting (Buhalis et al., 2023). According to ChatGPT's response to Q8, DMOs can use several advanced AI techniques (e.g., NLP, computer vision, voice recognition, sentiment analysis, and accessibility auditing) in sensory marketing to gather feedback from disabled people aiding in the improvement of accessibility and sensory experiences. These results provide credence to the claim that big data analysis must be used by DMOs to study visitor experiences, favorite locations, and attractions to improve tourism management and promotion (Aguar & Szekut, 2019). In response to Q9, the ChatGPT provided a list of a sensory marketing mix for accessible tourism including sight, sound, touch, taste, smell, and multi-sensory experiences. This output is in line with the work by Fong et al. (2022) claiming that the five senses that make up human perception are at the basis of sensory marketing. For Q10, the ChatGPT prepared a table to show how AI-powered systems may recommend certain activities, lodgings, and attractions that are friendly to visitors with hearing and visual impairments. ChatGPT also created a figure for Q11 that includes AI tools that can be used in sensory marketing for accessible tourism. These outcomes suggest that many activities might be made available for those who have visual or auditory impairments utilizing AI-powered apps that can be accessed via a smartphone. For instance, text-to-speech or speech-to-text could be of great use to those who have hearing or vision difficulties. These findings support the claim that activities for people with disabilities can be adapted to allow them to participate fully in travel without any limitations (e.g., Darcy et al., 2010; Ribeiro et al., 2018).

While ChatGPT presents new insights by providing personalized information for tourists, it also presents several challenges that need to be addressed. ChatGPT uses a huge amount of data to cater to the need for personalized recommendations for disabled individuals and to understand their needs which might not be available. As a result, the collection of data from individuals through AI applications, which contributes to the creation of big

data, gives rise to numerous ethical considerations. Those people may thus have privacy concerns and lack trust in the technology as mentioned by ChatGPT's response to Q12, Q13, and Q15. ChatGPT as an AI application shares sensitive data with third parties for marketing purposes could be a concern factor. This has been observed in the experiences of individuals with disabilities who, although generally positive, may also find it frustrating. These findings are consistent with earlier studies (e.g., Carvalho & Ivanov, 2023; Güngör, 2020; Rana et al., 2022) which highlighted the key concerns, challenges, and perceived risks associated with adopting AI-powered tools. ChatGPT provides a list of a few policies put in place by concerned entities to protect big data. To secure personal data flowing from various big data applications, governments particularly adopt regulations like the Personal Data Protection Act. These results lend weight to past studies (e.g., Carvalho & Ivanov, 2023; Ivanov & Soliman, 2023) outlining the critical elements to be considered when applying AI-generated content in real-world settings. Additionally, ChatGPT's answer to Q14 included a list of potential costs related to the use of AI-powered tools. The challenges faced by such tools in sensory marketing for accessible tourism involve the ongoing cost of ensuring these applications are up to date and aligning them to disabled individuals' needs. This finding supports the work by Ivanov and Webster (2018) discussing the costs and benefits of adopting AI tools, robots, and service automation by tourism and hospitality organizations. According to ChatGPT's response to Q16, AI tools may be able to assist travelers with disabilities in overcoming sensory challenges and engaging in more inclusive interactions. This result confirms the claim that, despite the usefulness of AI-powered systems, it is crucial to increase awareness among stakeholders, users, and AI designers to enhance the tourism experience while considering accessibility (Lin et al., 2022).

The output produced by ChatGPT in response to Q17 provided a practical set of guidelines for using AI applications in sensory marketing for accessible tourism. These include making sure the user interface complies with accessibility standards, including a variety of input options for people with impairments, keeping the language simple, and offering alternative sensory output. This result is in line with earlier research that highlighted the practical guidelines and implementation of AI for marketing (Sterne, 2017). The ChatGPT's response to Q18 indicated that people with disabilities may have easier access to and use AI technologies in sensory marketing, resulting in a more inclusive user experience. The finding is consistent with past research (Gam et al., 2023; Pelet et al., 2019) revealing that AI and IoT could stimulate visitors' sensory experiences and increase their loyalty. Finally, ChatGPT emphasized the necessity for AI-generated sensory marketing content to be developed in conjunction with people who have impairments and adhere to accessibility standards to ensure that it meets their unique needs. This supports the argument that the power of technologies and AI has developed smart experiences in tourism (Soliman et al., 2021), which offers multimodal interactions with people, including those with impairments, so they can utilize different senses to experience a tourist site that may feel inclusive (Chan & Agapito, 2022).

Considering the responses produced by the ChatGPT, the current work presents a variety of contributions to both academia and practitioners. To begin with, this AI-generated research extends the current literature on different themes within the tourism and hospitality field. These involve tourism marketing, tourism policy and planning, AI-powered marketing tools, and destination management and marketing. This paper, on the one hand, could complement and reinforce the theoretical underpinnings concerning digital content marketing in the tourism and hospitality industry. On the other hand, it advances our understanding related to the theme of accessible tourism marketing. Additionally, the current research contributes to the scant efforts that have been made to investigate how the designated strategies and operations of sensory marketing could be successfully used to promote accessible tourism utilizing AI-powered applications. To be more specific, the present study is regarded, to the best of our knowledge, as one of the earliest endeavors to shed light on how AI-generated sensory marketing content could be applied to promote accessible tourism.

This study also provides a variety of managerial contributions and practical insights to different concerned stakeholders in the tourism and hospitality sectors. ChatGPT's responses emphasize the critical role that AI-

produced sensory marketing content could play in promoting accessible tourism. This necessitates close cooperation amongst several tourism stakeholders (such as destination managers, destination marketers, technology designers, and programmers) to implement a comprehensive sensory marketing strategy for accessible tourism effectively. The findings of this AI-generative research can be used by destination managers and marketers to formulate a successful sensory marketing strategy for accessible tourism. The study also underlines the need for destination managers to invest in developing beneficial relationships with disabled individuals and establish a long-term sensory marketing strategy for them. In this regard, destination management organizations can use AI-powered tools to create inclusive and accessible digital interfaces for sensory marketing, like websites, mobile apps, and VR experiences, to ensure that they provide accurate and comprehensive information about the sensory aspects of tourist destinations, attractions, and facilities for disabled people. Additionally, destination marketing organizations may tweak their marketing strategies to motivate disabled people by investigating their requirements and motivations. This might be accomplished by utilizing AI to generate innovative marketing campaigns tailored for such individuals. This might result in an improvement in their intelligence experience, which in turn significantly influences levels of behavioral loyalty, satisfaction, and trust (Gam et al., 2023). Furthermore, the current research project discusses the advantages and disadvantages of using sensory marketing content produced by AI for accessible tourism. As a result, it tackles the psychological and social aspects that have an impact on how AI-generated sensory marketing content is adopted by individuals with disabilities. Indeed, this could help destination managers and marketers in comprehending the motives and behavior of disabled people toward accessible tourism and associated destinations.

Like any study, there are several directions for future research concerning the adoption of language models for sensory marketing in accessible tourism, especially for people with disabilities. First, future research could investigate the key drivers affecting the concerned stakeholders' (e.g., destination managers, hoteliers, etc.) behavior including attitude and intention toward adopting generative AI tools (e.g., ChatGPT) for sensory marketing in accessible tourism. In addition, future studies could concentrate on the development and assessment of the function of language models in producing immersive and descriptive content (such as detailed audio and haptic feedback), tailored specifically to the sensory preferences and needs of various disability groups, linked to various tourist destinations, attractions, and accommodations. Hence, another promising research direction could be examining the crucial factors impacting the behavior of people with disabilities toward using these immersive and descriptive contents generated by language models. Researchers may also investigate the application of language models in real-time translation and interpretation services to assist travelers with disabilities in interacting and communicating with locals and service providers. This may offer promising research opportunities for enhancing accessible tourism and the overall travel experiences of people with disabilities. Moreover, further research is recommended to undertake a thorough examination of the usefulness of the information obtained from generative AI tools (e.g., ChatGPT) in the selection of accessible tourist destinations and marketing strategies. Research may also be conducted on establishing interactive conversational agents, supported by large language models, that would be able to engage users (i.e., disability groups) in meaningful conversations and adapt to their specific needs and preferences.

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