

Gastronomy in tourism management and marketing: an interview with ChatGPT

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Abstract

This viewpoint analyses the role of gastronomy in tourism management and marketing, looking at present and future perspectives. In line with recent research, this paper uses ChatGPT as an interviewee to build on the discourse of gastronomy-based tourism management and marketing, and discuss the opportunities that emerge from using Generative pre-trained transformers to influence visitor motivations and perceptions. This paper is one of the first to explore the relationships between this language model and gastronomy in tourism.

Keywords: ChatGPT, food tourism, management, marketing

Type: Viewpoint

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I. Introduction

Public and private organizations are utilizing a wide range of cutting-edge technology and innovation strategies (i.e., IoT, AI, collaborative robotics, big data analytics) to address the issues raised by Industry 5.0 (Maddikunta et al., 2022; Holroyd, 2022). Generative Artificial Intelligence (GenAI) is a type of AI technology that can generate data, such as text, code, simulations, photos, 3D objects, and videos in response to a human-provided prompt, making them look intelligent (Peres et al., 2023). Previous research shows that the concept is complex and encapsulates a range of applications and implications (Wang, 2019). The use of AI in research is observed both in the natural sciences (Biswas, 2023a) and social sciences (Cooper, 2023), where its application are growing quickly. In this sense, large language models are a significant advancement in AI (Kasneji et al., 2023), and ChatGPT has emerged as an example of generative pre-trained transformers (GPT), one of the models that generate human-like text.

GenAI has the capability to create diverse and realistic content, facilitate creative exploration and innovation, automate time-consuming tasks, enhance personalization and recommendation systems, and contribute to advancements in fields such as art (Guo et al., 2023), education (Kasneji et al., 2023) and medicine (Biswas, 2023b), between others. For instance, ChatGPT can promote consumer engagement, customer service, customization and purchasing, social interaction and communication, cost-effectiveness, insights into consumer behaviour, and marketing efforts (Paul et al., 2023). Organizations stand to gain advantages by comprehending and adopting this shift. Although these technologies are available at no cost, their resource requirements are substantial, which may prompt industry leaders to impose fees for their use (Dwivedi et al., 2023). These models can also lead to bias derived from the data sources the system relies on (Zhai, 2022).

In recent months, an increasing number of publications have analyzed the role of GPT in hospitality and tourism. While the body of research in the natural and social sciences is large, as it is also the news content in relation to the advantages and threats of using GPTs, the analysis of language models in hospitality and tourism is limited. Carvalho and Ivanov (2023) are the first to scrutinize the impact of ChatGPT on tourism processes. They state that language models will contribute to further streamlining customer service in front-of-house operations and increasing productivity and efficiency in back-of-house operations. This may boost capacity for content production and request handling while also freeing up human resources for use in areas such as creativity, strategy, market research, and new product development (Carvalho and Ivanov, 2023). Although negative consequences for human resources are expected, this technology mostly enhances tourism employees (Carvalho and Ivanov, 2023, p. 1). Ivanov and Soliman (2023) go one step further and also focus on the influence of ChatGPT on tourism education and research, “because it can do what students and researchers should do, namely, generate text” (Ivanov and Soliman, 2023, p. 1). In this sense, they affirm that it is crucial to incorporate generative language models in tourism academia, which results in a growing number of ethical implications (Skavronskaya et al., 2023).

In the context of hospitality and tourism, gastronomy represents one of the most important attractions (Ellis et al., 2018; Fusté-Forné and Wolf, 2023). Gastronomic experiences are a source of tourism motivation, experiences, and satisfaction (Richards, 2021), and also a driver for the competitiveness of destinations (Knollenberg et al., 2021) and experiential management and marketing (Dixit and Prayag, 2022). Previous research acknowledges the role of technology in food tourism futures (Fusté-Forné and Ivanov, 2021; Okumus, 2021). In line with this increasing body of research, this viewpoint aims to explore Open AI's Chat GPT (Open AI, 2023) perspectives on the present and future of gastronomy tourism management and marketing. To this purpose, we use ChatGPT as an interviewee, following previous research that has employed the same approach (see Iskender, 2023), in order to understand the implications of generative AI for gastronomy in tourism. This approach fits with this emerging, innovative and timely research and adds a fresh and new perspective to the relationships between tourism and language models from the perspective of gastronomy.

2. Gastronomy in tourism by ChatGPT

This section includes the responses to the interview from ChatGPT.

Q1: What is the role of technology in gastronomy tourism?

“Technology has played a significant role in the development of gastronomy tourism, which refers to the travel experience that focuses on exploring the local food and drink culture of a destination. The following are some examples of how technology has impacted gastronomy tourism:

1. **Social Media:** Social media platforms like Instagram and Facebook have allowed travelers to share their culinary experiences with a wider audience, which in turn has helped promote gastronomy tourism. Travelers can share photos of local dishes, review restaurants, and recommend must-try dishes to their followers.
2. **Online Booking:** Online booking platforms have made it easier for travelers to plan their culinary experiences in advance. They can search for and book culinary tours, cooking classes, and restaurant reservations online, often with reviews and recommendations from other travelers.
3. **Mobile Apps:** There are now mobile apps specifically designed for gastronomy tourism that help travelers discover local cuisine and plan their culinary experiences. These apps offer features such as restaurant recommendations, local food and drink guides, and even language translation for menu items.
4. **Virtual Reality:** Virtual reality technology allows travelers to experience local food and drink culture from the comfort of their own homes. Virtual tours of local markets, cooking classes, and even restaurant experiences can be accessed through virtual reality technology.

In summary, technology has made it easier for travelers to discover and experience local food and drink culture, which has helped promote gastronomy tourism. From social media to virtual reality, technology has played a significant role in shaping the future of culinary tourism.”

Q2: What are the opportunities of using Generative pre-trained transformers (GPT) in gastronomy tourism?

“There are several opportunities of using Generative pre-trained transformers (GPT) in gastronomy tourism. GPT is a type of natural language processing (NLP) model that can generate human-like text, making it ideal for creating content such as recipe descriptions, restaurant reviews, and food-related stories. Here are some opportunities of using GPT in gastronomy tourism:

1. **Personalized Recommendations:** GPT can generate personalized recommendations for food and drink experiences based on a traveler’s preferences and dietary requirements. This can help travelers discover new and exciting local cuisine that they may not have otherwise tried and create a more tailored and personalized travel experience.
2. **Virtual Tours:** GPT can be used to create virtual tours of local markets and food producers, allowing travelers to experience local cuisine from the comfort of their own home. This can be especially useful for travelers who are unable to visit a destination in person, due to financial, time, or health constraints.
3. **Recipe Generation:** GPT can be trained on a large corpus of recipe data to generate new, unique recipes that reflect local cuisine. These generated recipes can be used to create new dishes or to inspire chefs and home cooks to try new flavors and ingredients.
4. **Menu Creation:** GPT can be used to generate restaurant menus that reflect local cuisine and culture. This can help restaurants offer unique dining experiences that are tailored to their location and attract travelers who are seeking an authentic gastronomic experience.
5. **Marketing:** GPT can be used to generate engaging and immersive stories that revolve around food and drink culture. These stories can be used in marketing campaigns to promote culinary tourism, highlight local food producers, and create a deeper connection between travelers and the local cuisine.

In summary, GPT can be used in gastronomy tourism to create personalized recommendations, virtual tours, new recipes, unique menus, and engaging marketing content that highlights local cuisine and culture. By leveraging the power of NLP, GPT can help promote culinary tourism and create memorable travel experiences for food lovers.”

Q2.1.: Considering that one of the opportunities of using GPT in gastronomy tourism is offering personalized recommendations, could you create a table with personalized recommendations of vegan restaurants that I could visit in Paris? Please include the medium price too.

Personalized recommendation provided by ChatGPT (see Figure 1).



Vegan Restaurant	Location	Medium Price Range (per person)
Gentle Gourmet	24 Boulevard de la Bastille, 75012 Paris	€€€
Le Potager de Charlotte	12 Rue de la Tour d'Auvergne, 75009 Paris	€€
Cloud Cakes	6 Rue Mandar, 75002 Paris	€€
Hank Vegan Burger	55 Rue des Archives, 75003 Paris	€€
Wild & the Moon	55 Rue Charlot, 75003 Paris	€€
VG Pâtisserie	123 Boulevard Voltaire, 75011 Paris	€€
Jah Jah by Le Tricycle	11 Rue des Petites Écuries, 75010 Paris	€€€
42 Degrés	109 Rue du Faubourg Poissonnière, 75009 Paris	€€€
Tien Hiang	14 Rue Bichat, 75010 Paris	€€
Sol Semilla	23 Rue des Vinaigriers, 75010 Paris	€€

Please note that the price range mentioned here is a general indication and can vary based on the specific menu items chosen. It's always a good idea to check their websites or contact the restaurants directly for the most up-to-date information on prices and availability. Enjoy exploring the vegan culinary scene in Paris!

Figure 1. Vegan restaurants and medium price range recommendations

Q2.2.: Considering that one of the opportunities of using GPT in gastronomy tourism is generating recipes, write a complete recipe for traditional food from Spain.

“Spanish Tortilla

Ingredients:

- 4 medium-sized potatoes
- 1 medium-sized onion
- 6 large eggs
- Salt to taste
- Olive oil for frying

Instructions:

1. Preparing the potatoes and onion:
 - Peel the potatoes and rinse them under cold water.
 - Cut the potatoes into thin slices, about 1/4 inch thick.
 - Peel and thinly slice the onion.

2. Frying the potatoes and onion:
 - In a large non-stick skillet, heat about 1/2 inch of olive oil over medium heat.
 - Add the potato slices to the hot oil and fry them until they are tender and lightly golden, stirring occasionally to prevent sticking. This should take about 8-10 minutes.
 - Add the sliced onion to the pan and continue frying until the onions are translucent and the potatoes are fully cooked, but not browned. This should take an additional 5-6 minutes.
3. Draining excess oil:
 - Once the potatoes and onions are cooked, remove them from the skillet using a slotted spoon, allowing excess oil to drain back into the pan.
 - Transfer the potatoes and onions to a large bowl and let them cool slightly.
4. Beating the eggs:
 - In a separate bowl, beat the eggs until well combined.
 - Season the beaten eggs with salt to taste.
5. Combining the potatoes, onions, and eggs:
 - Add the cooked potatoes and onions to the beaten eggs and gently mix until they are well coated.
6. Cooking the tortilla:
 - In the same skillet used to fry the potatoes and onions, remove most of the oil, leaving only a thin layer on the bottom.
 - Heat the skillet over medium-low heat.
 - Pour the potato and egg mixture into the skillet, spreading it evenly with a spatula.
 - Cook the tortilla for about 5-7 minutes, or until the bottom is set and golden brown.
7. Flipping the tortilla:
 - Place a large plate or round flat lid over the skillet.
 - Carefully and quickly flip the skillet upside down, transferring the tortilla onto the plate or lid.
8. Cooking the other side:
 - Slide the tortilla back into the skillet, uncooked side down.
 - Cook for another 5-7 minutes, or until the tortilla is cooked through and lightly browned on the bottom.
9. Serving:
 - Once the tortilla is cooked to your liking, remove it from the skillet and let it cool for a few minutes.
 - Cut the tortilla into wedges or squares.
 - Serve warm or at room temperature as an appetizer, tapas, or a main dish.
 - Enjoy the delicious Spanish tortilla!

Note: You can customize this recipe by adding other ingredients such as diced bell peppers, cooked chorizo, or grated cheese to the egg mixture before cooking the tortilla.”

Q2.3.: *Considering that one of the opportunities of using GPT in gastronomy tourism is creating menus, generate a restaurant menu based on Japanese food, including five starters, five main courses, five side dishes, five vegetarian options, and five desserts.*

Restaurant Menu: Japanese Cuisine (see Figure 2).

“Starters:

1. Edamame: Steamed young soybeans seasoned with sea salt, a classic Japanese appetizer.
2. Miso Soup: Traditional Japanese soup made with fermented soybean paste (miso), tofu, seaweed, and scallions.

3. Gyoza: Pan-fried dumplings filled with a savory mixture of ground pork, cabbage, and aromatics, served with a soy-based dipping sauce.
4. Agedashi Tofu: Lightly battered and deep-fried tofu cubes, served in a flavorful dashi broth with grated daikon radish and ginger.
5. Yakitori: Skewered and grilled chicken pieces basted with a sweet and savory soy glaze, a popular street food in Japan.

Main Courses:

1. Sushi Platter: Assortment of fresh nigiri and maki sushi, featuring a variety of fish and seafood, served with soy sauce, wasabi, and pickled ginger.
2. Ramen: Traditional Japanese noodle soup with a rich broth, tender chashu pork slices, noodles, and various toppings like bamboo shoots, soft-boiled egg, and nori seaweed.
3. Teriyaki Salmon: Grilled salmon fillet glazed with a sweet and savory teriyaki sauce, served with steamed rice and sautéed vegetables.
4. Tempura Udon: Thick wheat noodles served in a hot dashi broth, topped with a medley of crispy tempura-fried vegetables and shrimp.
5. Tonkatsu: Breaded and deep-fried pork cutlet, served with shredded cabbage, rice, miso soup, and a tangy tonkatsu sauce.

Side Dishes:

1. Goma-ae: Blanched spinach or green beans dressed in a sesame sauce.
2. Tsukemono: Assorted Japanese pickles, including daikon radish, cucumber, and cabbage, served as a refreshing side dish.
3. Wakame Salad: A refreshing seaweed salad with sesame dressing, garnished with thinly sliced cucumber and sesame seeds.
4. Sunomono: A light and tangy cucumber salad marinated in a sweet and sour vinegar dressing.
5. Yasai Itame: Stir-fried mixed vegetables, such as bell peppers, carrots, and mushrooms, seasoned with soy sauce and ginger.

Vegetarian Options:

1. Vegetable Tempura: Assorted seasonal vegetables lightly battered and deep-fried until crispy, served with a dipping sauce.
2. Tofu Teriyaki: Grilled tofu with a sweet teriyaki glaze, accompanied by steamed rice and sautéed vegetables.
3. Inari Sushi: Sweet and tangy sushi rice stuffed inside seasoned fried tofu pockets.
4. Vegetable Yakisoba: Stir-fried wheat noodles with an assortment of colorful vegetables, seasoned with a savory sauce.
5. Vegetable Curry: A fragrant and flavorful Japanese curry made with an assortment of vegetables, served with steamed rice.

Desserts:

1. Matcha Ice Cream: Creamy and rich green tea-flavored ice cream, a popular dessert in Japan.
2. Mochi: Soft and chewy rice cakes filled with sweet fillings like red bean paste, matcha, or seasonal fruit.
3. Dorayaki: Sweet pancake-like treats filled with red bean paste, often enjoyed with a cup of tea.
4. Taiyaki: Fish-shaped waffles filled with sweet fillings like custard, chocolate, or sweet potato.
5. Anmitsu: A refreshing dessert made with agar jelly, sweet red bean paste, fruit, and a drizzle of syrup, typically served with a scoop of ice cream.”



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2. Miso Soup: Traditional Japanese soup made with fermented soybean paste (miso), tofu, seaweed, and scallions.
3. Gyoza: Pan-fried dumplings filled with a savory mixture of ground pork, cabbage, and aromatics, served with a soy-based dipping sauce.
4. Agedashi Tofu: Lightly battered and deep-fried tofu cubes, served in a flavorful dashi broth with grated daikon radish and ginger.
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3. Teriyaki Salmon: Grilled salmon fillet glazed with a sweet and savory teriyaki sauce, served with steamed rice and sautéed vegetables.
4. Tempura Udon: Thick wheat noodles served in a hot dashi broth, topped with a medley of crispy tempura-fried vegetables and shrimp.
5. Tonkatsu: Breaded and deep-fried pork cutlet, served with shredded cabbage, rice, miso soup, and a tangy tonkatsu sauce.

Figure 2. Menu creation example

Q3: What are the challenges of using Generative pre-trained transformers (GPT) in gastronomy tourism?

“While Generative pre-trained transformers (GPT) can offer several opportunities for the gastronomy tourism industry, there are also some challenges associated with its use. Here are some of the challenges of using GPT in gastronomy tourism:

1. **Data Availability:** GPT requires a large amount of high-quality data to generate accurate and meaningful outputs. In the context of gastronomy tourism, data can be limited or fragmented, especially for less explored destinations, making it difficult to train the model on the specific food culture of the destination.
2. **Lack of Consistency:** GPT generates text based on the patterns it has learned from its training data, which may lead to inconsistencies in the generated outputs. For example, it may generate recipes or menu items that are not feasible or culturally appropriate, leading to a disconnect with the local gastronomy.
3. **Quality Control:** As with any machine learning model, GPT outputs must be carefully reviewed and validated by humans to ensure accuracy and relevance. The generated content may require significant editing and refining to ensure it aligns with the local cuisine, culture, and context.
4. **Cultural Sensitivity:** Gastronomy tourism is closely tied to local culture and traditions, and it is crucial to ensure that the generated content is respectful and sensitive to cultural nuances. GPT may generate outputs that are unintentionally inappropriate or offensive, which can harm the reputation of the destination and the tourism industry.
5. **Language Barriers:** GPT relies on text inputs, and language barriers can be a significant challenge in gastronomy tourism. Generating content in multiple languages can be resource-intensive and require significant investment in translation technology.

In summary, while GPT offers opportunities for gastronomy tourism, it is essential to consider the challenges associated with its use, such as data availability, lack of consistency, quality control, cultural sensitivity, and language barriers. To mitigate these challenges, it is important to combine GPT with human expertise and review processes, and to carefully consider the cultural and linguistic context of the generated content.”

Q4: Can Generative pre-trained transformers (GPT) influence gastronomy tourists?

“Yes, Generative pre-trained transformers (GPT) can influence gastronomy tourists in several ways. GPT can generate engaging and personalized content that can inspire travelers to explore local cuisine and create memorable food experiences. Here are some ways GPT can influence gastronomy tourists:

1. **Discover New Foods:** GPT can generate personalized recommendations for food and drink experiences based on a traveler’s preferences and dietary requirements. This can help travelers discover new and exciting local cuisine that they may not have otherwise tried.
2. **Create Unique Experiences:** GPT can generate restaurant menus that reflect local cuisine and culture and generate immersive stories that revolve around food and drink culture. This can help create a deeper connection between travelers and the local cuisine and create a more memorable and unique travel experience.
3. **Improve Travel Planning:** GPT can help travelers plan their gastronomy tourism itinerary more effectively by generating detailed information about local markets, food producers, and restaurants. This can help travelers make informed decisions about where to eat and what to do and create a more efficient and enjoyable travel experience.
4. **Encourage Culinary Creativity:** GPT can generate unique and creative recipes that reflect local cuisine and culture. This can inspire chefs and home cooks to experiment with new flavors and ingredients, and create their own culinary masterpieces based on the local cuisine.
5. **Foster Cultural Understanding:** GPT can generate content that highlights the cultural and historical significance of local cuisine. This can help travelers understand the cultural context of the local cuisine and foster a deeper appreciation and understanding of the destination’s cultural heritage.

In summary, GPT can influence gastronomy tourists by helping them discover new foods, create unique experiences, improve travel planning, encourage culinary creativity, and foster cultural understanding. By generating personalized and engaging content, GPT can inspire travelers to explore local cuisine and create memorable food experiences.”

Q5: How can Generative pre-trained transformers (GPT) contribute to gastronomy tourism management?

“Generative pre-trained transformers (GPT) can contribute to gastronomy tourism management in several ways. Here are some examples:

1. **Content Creation:** GPT can generate high-quality and engaging content that can be used for marketing and promotional purposes, such as social media posts, blog articles, and destination guides. This can help promote the destination’s gastronomy and attract more tourists.
2. **Personalization:** GPT can generate personalized recommendations for food and drink experiences based on a traveler’s preferences and dietary requirements. This can help tourism managers tailor their offerings to meet the needs of different types of travelers and create a more satisfying travel experience.
3. **Market Analysis:** GPT can analyze social media data and online reviews to identify emerging food trends and consumer preferences. This can help tourism managers stay ahead of the curve and adapt their offerings to meet changing market demands.
4. **Menu Optimization:** GPT can analyze restaurant menus to identify areas for improvement, such as optimizing pricing, adding new dishes, and adjusting portion sizes. This can help restaurants improve their profitability and customer satisfaction.
5. **Sustainability:** GPT can help tourism managers promote sustainable gastronomy tourism by generating content that highlights sustainable food practices and local food systems. This can help raise awareness among tourists and encourage them to support sustainable gastronomy practices.

6. **Crisis Management:** GPT can be used to generate crisis communication messages in case of a food-related emergency, such as a foodborne illness outbreak. This can help tourism managers communicate quickly and effectively with travelers and minimize the impact on the destination's reputation.

In summary, GPT can contribute to gastronomy tourism management by generating high-quality and personalized content, analyzing market data and menus, promoting sustainable gastronomy practices, and helping tourism managers respond to crises. By leveraging the power of GPT, tourism managers can improve their offerings, attract more tourists, and create a more sustainable and resilient gastronomy tourism industry.”

Q6: How can Generative pre-trained transformers (GPT) contribute to gastronomy tourism marketing?

“Generative pre-trained transformers (GPT) can contribute to gastronomy tourism marketing in several ways. Here are some examples:

1. **Content Creation:** GPT can generate high-quality and engaging content such as social media posts, blog articles, destination guides, and videos that showcase the destination's gastronomy. This content can be used to attract more tourists, promote local cuisine, and generate interest in the destination's food and drink offerings.
2. **Personalization:** GPT can generate personalized recommendations for food and drink experiences based on a traveler's preferences and dietary requirements. This can help tourism marketers tailor their offerings to meet the needs of different types of travelers and create a more satisfying travel experience.
3. **Storytelling:** GPT can generate immersive stories that revolve around food and drink culture, highlighting the history, culture, and traditions behind local cuisine. These stories can help create a deeper connection between travelers and the local cuisine and inspire them to explore the destination's gastronomy.
4. **Influencer Marketing:** GPT can be used to identify social media influencers who are interested in food and drink culture and who have a large following. This can help tourism marketers collaborate with influencers to promote local cuisine and attract more tourists to the destination.
5. **Branding:** GPT can be used to generate unique and creative branding concepts that reflect the destination's gastronomy and culture. This can help tourism marketers differentiate the destination from competitors and create a strong brand identity that resonates with travelers.
6. **Market Research:** GPT can analyze social media data and online reviews to identify emerging food trends and consumer preferences. This can help tourism marketers stay ahead of the curve and adapt their marketing strategies to meet changing market demands.

In summary, GPT can contribute to gastronomy tourism marketing by generating high-quality and personalized content, creating immersive stories that highlight local cuisine, identifying influencers, creating unique branding concepts, and analyzing market data. By leveraging the power of GPT, tourism marketers can promote the destination's gastronomy, attract more tourists, and create a stronger brand identity.”

Q7: What is the future in gastronomy-based tourism focused on Generative pre-trained transformers (GPT) and new technologies?

“The future of gastronomy-based tourism focused on Generative pre-trained transformers (GPT) and new technologies is promising. Here are some potential developments:

1. **Augmented Reality and Virtual Reality:** AR and VR can be used to create immersive gastronomy experiences, such as virtual food tastings and interactive cooking classes, that can be accessed remotely. GPT can generate personalized content for these experiences, such as tailored recipes and food recommendations based on the user's preferences.
2. **Voice Recognition and Chatbots:** Voice recognition and chatbots can be used to create conversational interfaces that allow travelers to interact with gastronomy tourism services and get personalized recommendations. GPT can generate natural language responses and recommendations based on the user's input.

3. **Blockchain:** Blockchain can be used to create a more transparent and secure supply chain for local food products, which can help promote sustainable gastronomy practices and build trust among travelers. GPT can be used to generate content that highlights the benefits of blockchain in gastronomy tourism.
4. **Artificial Intelligence:** AI can be used to analyze large amounts of data and generate insights that can help improve gastronomy tourism offerings, such as optimizing menu prices and predicting food trends. GPT can be used to generate content that promotes the use of AI in gastronomy tourism.
5. **5G Technology:** 5G technology can be used to create faster and more reliable internet connections, which can enable real-time communication and streaming of gastronomy experiences. GPT can be used to generate content that highlights the benefits of 5G technology in gastronomy tourism.

In summary, the future of gastronomy-based tourism focused on ChatGPT, and new technologies is likely to include more immersive and personalized experiences, improved supply chain transparency, and more efficient and data-driven operations. As GPT and new technologies continue to evolve and become more accessible, the potential for innovation in gastronomy tourism is limitless.”

3. Discussion and conclusion

The impact of technology on gastronomy tourism has increased in recent years, with social media and virtual experiences emerging as the main actors in the digital tourism system. Previous research (see for example, Fusté-Forné and Wolf, 2023; Okumus, 2021) also shows that technology has not only facilitated the discovery of experiential gastronomic experiences, but it also shapes the present and future of gastronomy tourism. This perspective highlights the potential of GPTs, as demonstrated by Open AI's ChatGPT, to augment the significance of gastronomy in tourism and involve tourists in gastronomic experiences, as succinctly outlined in the responses to Q1. Based on the responses gathered to Q2, we see that GPTs have the potential to contribute to the development of culinary experiences through various means such as recipe generation and menu creation but also in generating meaningful food-related stories that serve as a source of local-based narratives for marketing purposes, as we explore below. Also, language models are useful to develop personalized recommendations that drive visitors to explore the local food culture and nature if they have access to real-time data (Niszczota and Rybicka, 2023). The answers to Q2.1, 2.2 and 2.3 show that ChatGPT has the potential to facilitate the advancement of culinary tourism and establish distinctive gastronomical encounters that cater to the individual preferences and dietary restrictions of travelers. This will help the supply side develop marketing strategies adjusted to their target audiences.

In line with previous research that has inspired the approach through an interview with the Open AI's ChatGPT (see Iskender, 2023), results show that language models can improve both the back- and front-office management of tourism experiences (Carvalho and Ivanov, 2023), providing a range of implications for gastronomy in tourism. In this sense, GPTs can be used to generate stories around food and drink culture and create a deeper connection between travelers and the local cuisine through storytelling. For example, the researchers asked the Open AI's ChatGPT to create a marketing narrative for a small restaurant in the middle of nature where we work with proximity products and traditional dishes. The reply shows the potential of the model as a storyteller (see Figure 3). Previous research also shows that ChatGPT can be used to create narratives and reports (Dwivedi et al., 2023).

The findings indicate that the utilization of GPTs in gastronomy tourism poses certain challenges, as evidenced by the responses received for Q3. ChatGPT is dependent on data availability, and results provided by language models may also offer a lack of consistency, or repetition in the contents, as this paper also shows. This will require a human-based quality control of the accuracy of the text, and, in relation to gastronomy tourism, its adequate context. The local culture and traditions need to be reviewed, together with language issues, to represent the authenticity of places, people, and practices.

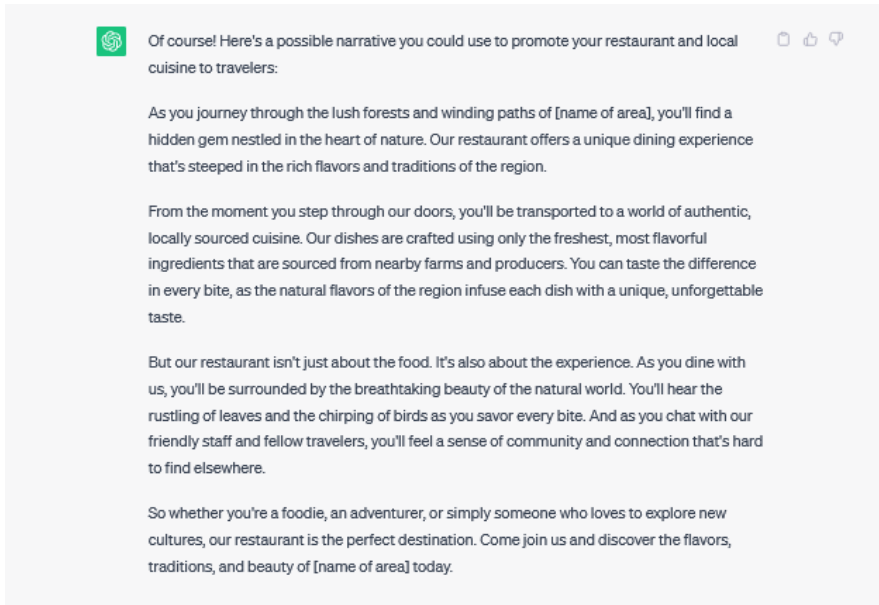


Figure 3. *The example of storytelling*

By implementing suitable measures to enhance the precision and relevance of the produced content, ChatGPT has the potential to significantly impact culinary tourists by introducing novel cuisines and recipes, enhancing their travel arrangements, and fostering culinary innovation and cultural comprehension, as reveal in the answers to Q4. In terms of the contribution of GPTs to gastronomy tourism management and marketing, results obtained to Q5 also show that content creation and personalization are crucial to gastronomy tourism futures. Based on market analysis and market research, language models can also help local stakeholders develop their offerings (for example, menu optimization) and marketing strategies (for example, using influencers) to meet changing market demands, and focus on unique and creative branding concepts that protect and promote the destination's gastronomy (Chen et al., 2023). The aforementioned results are also evident in Q6.

Additionally, the interview answers show the importance of sustainable food practices and local food systems, which increases the awareness and support of sustainable gastronomy practices. In addition, the interview also revealed the usefulness of GPTs to help in crisis management and minimize the impact of crisis situations (for example, a pandemic) on the destination's image to create a resilient gastronomy tourism system (Fusté-Forné and Jamal, 2021; Kattiyapornpong et al., 2022). This reinforces the role of the language models in the creation of a unique storytelling that conveys the identity of the place, but also the changes derived from internal and external factors. As ChatGPT explains in Q7, a future of gastronomy tourism based on new technologies is promising and its potential is endless. Gastronomic experiences developed based on generated content valorize user's preferences. The use of artificial and virtual reality, in the context of 5G technology, will also include more immersive gastronomic experiences (Youssef and Spence, 2021), as well as enhance the relevance of sustainability and resilience in gastronomy tourism.

We would like to end it with the answers to a final question to ChatGPT:

How can research contribute to the potential of Generative pre-trained transformers (GPT) in gastronomy tourism?
 “Research can contribute to the potential of Generative pre-trained transformers (GPT) in gastronomy tourism in several ways:

1. **Understanding User Needs:** Research can help tourism businesses and marketers understand the needs and preferences of travelers when it comes to gastronomy experiences. By understanding user needs, GPT-generated content can be tailored to meet the specific expectations of different types of travelers.
2. **Testing and Optimization:** Research can help businesses test and optimize GPT-generated content to ensure that it is effective in attracting and engaging tourists. By using techniques such as A/B testing, businesses can determine which types of content are most effective in generating interest and increasing conversions.
3. **Developing New Applications:** Research can help businesses and developers identify new and innovative applications for GPT in gastronomy tourism. For example, research can explore how GPT can be used to create more immersive and interactive gastronomy experiences, or how GPT can be used to improve supply chain transparency and sustainability.
4. **Understanding Market Trends:** Research can help businesses and marketers understand market trends and emerging technologies in gastronomy tourism. By staying up-to-date with the latest developments, businesses can ensure that they are using GPT and other technologies in the most effective and efficient ways.
5. **Evaluating Impact:** Research can help businesses evaluate the impact of GPT and other technologies on gastronomy tourism. By measuring metrics such as visitor numbers, revenue, and customer satisfaction, businesses can determine whether GPT-generated content and applications are effective in achieving their goals.

In summary, research can help businesses and marketers better understand user needs, optimize GPT-generated content, develop new applications, stay up-to-date with market trends, and evaluate the impact of GPT and other technologies on gastronomy tourism. By leveraging research, businesses can unlock the full potential of GPT in gastronomy tourism and create more engaging, personalized, and innovative experiences for travelers.”

Future research should analyze the implications of language models on the development of management and marketing plans regarding food tourism. Future research must be focused on analyzing how co-creation can be implemented in food tourism experiences. Investigating how language models can facilitate collaboration between tourists, local communities, and businesses in developing innovative and immersive food-related experiences allows us to better understand the market and consider the demands and trends. Futures studies could be focused on conducting a deep analysis of the relevance of ChatGPT information provided in the decision-making process of food tourism management and marketing plans. Research can also assess how language models are currently being used in food tourism management and marketing. By observing real-world applications of language models, researchers can identify best practices, challenges, and areas for improvement.

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