










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Introduction

Chatbot technology uses natural language processing (NLP), which relies on AI-trained models to accurately understand and respond to users.^[1] This chatbot has been designed to aid European travelers, it was fine tuned to speak in a humorous tone while answering traveling questions related to backpacking and/or planning a trip throughout the different European countries. Ideally, the end user will be someone that is interested in building an itinerary during a trip to Europe, the chatbot will help to build it based on the questions/prompts asked. It may also let the user know where to stay, what flights to take, what are the best cities to visits, as well as what are the ideal sites to visit. This chatbot will be able to replace mobile apps and websites and is quickly on track to become an indispensable element of the modern customer experience.^[1]

Unlike an ordinary traveling itinerary that you need to build on your own, wasting time researching, the chatbot can be a companion that could advise you to the best locations to visit. The AI will be in essence your personalized google search for your trip, able to answer any questions you may have about historical events, museum visits, or the path to take when backpacking through Europe.

Business Model Canvas- Chatbot focused on “Backpacking through Europe.”

BUSINESS MODEL CANVAS					
Key Partners  OpenAI ChatGpt Tourist Agents (B2B)	Key Resources  <u>Financial</u> (SBIR grants, Angel investment) <u>Physical</u> (Home Office) <u>Human</u> (Employees -Engineers and Accountant and HR services) <u>Legal</u> (IP/Reg/Contracts)	Value Propositions  1. Chatbot can simplify and improve the systems involved in traveling with an integrated Google maps functionality 2. Chatbot can instantly complete tasks (itinerary), gather information about local events at their destinations 3. According to Forbes, 68% of end users enjoy the convenience of using a Chatbot and how quickly it provides responses to prompts and/or questions 4. Chatbot will enhance travel experience providing additional services or upgrades\ 5. Reduce the need to hire additional employees (Tour guides)	Customer Relationships  <u>Get:</u> Adverting, Showcase, Website, SEO, and Social Media <u>Keep:</u> Customer Service <u>Grow:</u> Product Expansion	Customer Segments  Tourist Agents Individual Travelers	
	Key Activities  Research & Development (Chatbot updates and additional fine tuning)		Channels  Physical/ Indirect (Distributors- e.g. Tourist Agents, Phone/Internet platforms)		
Cost Structure  Human Resources/Employees (Accounting, Wageworks) Marketing (Website, SEO, Advertising) Space (Office Space) Legal Fees (IP/Reg/Contracts)		Revenue Streams  Affiliate Market (upselling & cross selling) & Advertising B2B- Tourist Agents / Agencies B2C Individual Subscriptions			

To make this section easier to read, the use of the BMC for easy visualization. For the (1) Customer Segments: there are two different approaches taken, the first is to cater this Chatbot to Tourist Agencies which can use this bot to help them to reduce the amount of tour guides they hired at their agencies reducing costs while enhancing the customer (travelers) experience. The second approach would be to have a platform ready-to-use by an individual customer that would pay a premium or subscription to use the chatbot, the individual use allows for a more personalized experience since they are able to provide the chatbot with prompts to help them through there trips. The individual platform is also able to have integrations into the chatbot such as Google Maps, language translations and provide local events at their destinations. Allowing the Chatbot to become a companion traveler or their own personalized tour guide.

To maintain adequate (2) Customer Relations, we intend to get customers by using advertisements both by conventional means and by using social media, we will keep our customers by providing exceptional customer service and final grow our business by expanding our platform to additional world locations.

Our (3) Channels will be both physical/indirect depending on if the traveler is using their own device or one provided through a travel agent to access the Chatbot; while our (4) Revenue Streams will consist of a Business-to-Business with the contracts made with different tour agents/agencies as well as Business-to-Customer by allowing individuals to personalize their traveling experience through subscriptions. Finally, we will provide advertisements while upselling and/or cross selling by working with an affiliate market.

Finally, our (5) Value Propositions are geared to provide an exceptional enhanced traveling experience to the customer whether they are getting the service through a traveling agent or with their own personalized subscription., while also providing cost effective options for our travel agent partners.

Our (6) Key Partnerships consist of the Open A1 -ChatGPT technology and our tourist agents/agencies. The (7) Key Resources are our financial stability initially started by angel investments and grant funding, our physical office spaces, employees that maintain the company operational and finally lawyers to help protect our intellectual property and contracts. Our (8) Key Activities will consist of our continuous ability to upgrade the fine tuning functionality of our Chatbot while integrating new features like Google Maps to enhance the traveler's experience. Finally, our (9) Cost Structure consist of paying our employees, office space, law firms, human resources services and marketing strategy.

Opportunity Assessment/ Customer Discovery/Reflection

During the customer discovery step multiple users were asked questions about their user experience and were asked their thoughts about how fine tuning the Chatbot to produce a NLP

with more humanized tone. The questions and responses from the users can be found at the following site:

<https://platform.openai.com/playground/p/HZ2WmnF7lOKnNPPy1xfnwMLZ?mode=chat>

User 1: My coworker Shaun who has recently transitioned from a Bench Scientist to a Data Scientist. I described to him how I fine-tuned the Chatbot by using commands written in python, with the intention to have the Chatbot have a humorous personality with the responses being laid back silly/blunt like the way I normally tend to speak. He spent some time playing around with the Chatbot asking it questions and prompts that would generate responses which he felt would sound like my speech patterns. At first many of the Assistant responses sounded more generic; however, occasionally you could hear my voice in the respond. Surprisingly, the last question (as displayed below) replicated my speech with its response to his question of “Why Europeans are so mean to tourists?” We both laughed a bit at the response. Finally, he felt that it was a great idea to have a Chatbot during your traveling experiences and was impressed with how well and quickly the Chatbot answered his questions.

User 2: My boyfriend Joseph has a background in Information Technology. I recently shared with him information about my project for school; however, he did not get to play with my Chatbot until this assignment. While asking the Assistant questions, he took a similar approach to Shaun, he wanted to see if the Chatbot sounded like my speech patterns, but quickly told me that it needed additional fine tuning which I was already aware of. Nonetheless, he enjoyed playing on the platform, when asked what his thoughts were on moving forward to commercialization of it, he response was the it was “definitely useful.”

Here is a screenshot with a few prompts/questions and responses from the users:

The screenshot shows a chat interface with the following elements:

- Header:** "Playground" on the left, "Chat" with a dropdown arrow in the middle, and "Europe Trip Itinerary - J..." with a close button and dropdown arrow on the right. A "Save" button is also present.
- System Prompt:** "SYSTEM Create a one month itinerary for Backpacking through Europe".
- Assistant Response 1:** "ASSISTANT Yes, Europeans do wear deodorant."
- User Question 1:** "USER Which country drinks the most alcohol?"
- Assistant Response 2:** "ASSISTANT According to the World Health Organization, the country that drinks the most alcohol is Belarus."
- User Question 2:** "USER Do you think I'm funny looking?"
- Assistant Response 3:** "ASSISTANT I'm sorry, I cannot answer that question."
- User Question 3:** "USER Why are Europeans so mean to tourists?"
- Assistant Response 4:** "ASSISTANT I don't think Europeans are mean to tourists. Some people are just rude and it has nothing to do with where they are from."
- Footer:** A green "Submit" button, a refresh icon, and a "Give us feedback" link.

Interesting enough on the last question in the figure above, the Assistant provided a respond that truly sounded in the intended tone after fine tuning; nonetheless, both users commented that further tuning is recommended since both users felt that the responses were often generic. However, they enjoyed playing around with the Chatbot, stating that it would be a useful tool to have when traveling not only to Europe, but other locations as well. Therefore, based on the feedback that was received this Chatbot should “go” towards commercialization.

References:

1. *What is a Voice Assistant?* | Botpress Blog. (n.d.). <https://botpress.com/blog/voice-assistant>
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<https://www.forbes.com/sites/forbestechcouncil/2023/02/02/the-role-of-chatbots-in-the-future-of-the-travel-industry/?sh=3144de47df75>
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