Chatbot Deployment with IBM Cloud Watson Assistant

A chatbot specifically designed to assist users with Facebook-related queries and issues.

1. Persona Design:

- **Name:** SocialSavvyBot
- **Tone:** Friendly, approachable, and helpful.
- **Style of Communication:** Employs a mix of text and visual elements. Utilizes natural language understanding to recognize and respond to user intents more accurately.

2.User Scenarios:

Common User Scenarios:

- **Profile Settings:**
  - How do I update my profile picture?
  - Can you help me change my Facebook username?
- **Privacy and Security:**
  - What privacy settings should I be aware of?
  - How do I secure my account with two-factor authentication?
- **News Feed Issues:**
  - My News Feed is not updating. What should I do?
  - Can I customize my News Feed preferences?
- **Messenger Assistance:**
  - How do I create a group chat in Messenger?
  - Help me troubleshoot Messenger video call issues.
- **Page Management:**
  - How can I schedule posts on my Facebook page?
  - What analytics are available for my Facebook page?

- **Profile Enhancement:**
  - How can I make my Facebook profile stand out?
  - What's the best way to create an eye-catching cover photo?
- **Security Assurance:**
  - Can you check if my Facebook account is secure?
  - What are the latest security measures on Facebook?
- **Content Creation Tips:**
  - Any advice for crafting engaging Facebook posts?
  - What types of content perform well on Facebook?
- **Messenger Productivity:**
  - Help me organize my Messenger chats efficiently.
  - Suggest some features to boost my Messenger productivity.
- **Page Growth Strategies:**
  - Strategies for increasing my Facebook Page followers?
  - How can I optimize my Page for better engagement?

3. Conversation Flow:

Sample Conversation Flows:

- **User: How do I update my profile picture?**

  SocialSavvyBot: Hey! To update your profile picture, go to your profile, hover over your current pic, and click "Update Profile Picture." From there, you can upload a new one. Need more help?

- **User: What privacy settings should I be aware of?**

  SocialSavvyBot: Great question! Privacy is crucial. Let's go through your settings together. Type 'privacy' to get started, and I'll guide you through the key settings.

- **User: What's the best way to create an eye-catching cover photo?**
  - Great question! Are you looking for design tips or tools to help you create a stunning cover photo?
- **User: Can you check if my Facebook account is secure?**
  - Absolutely, I can guide you through a security check. Before we start, have you noticed any suspicious activities recently, or is this just a routine check?

4. Response Configuration:

Sample Watson Assistant Configuration:

- **Intent: Update Profile Picture**
  - Example Phrases:
    - Change my profile picture.
    - How to update my FB profile pic?
- **Intent: Privacy Settings**
  - Example Phrases:
    - Facebook privacy tips.
    - Secure my account settings.

- **Intent: Profile Enhancement**
  - Example Phrases:
    - Tips for creating a standout Facebook cover photo.
    - Design advice for profile pictures.
- **Intent: Security Check**
  - Example Phrases:
    - Check my Facebook account security.
    - Guide me through a security assessment.

5. Platform Integration:

- Integrate SocialSavvyBot with Facebook Messenger for direct user interactions. Enable quick replies and buttons for a smoother user experience within Messenger.
- Utilize NLU capabilities to improve the understanding of user queries and provide more context-aware responses on Facebook Messenger.
- Implement quick replies based on detected intents, allowing users to navigate through conversation paths effortlessly.

6. User Experience:

- **Clear Prompts:** Ensure that prompts are concise and easy to follow.
- **Informative Responses:** Provide detailed and helpful responses to guide users through various Facebook-related tasks.
- **Multimedia Elements:** Integrate images or screenshots when explaining step-by-step processes to enhance clarity.
- **Interactive Elements:** Use buttons and quick replies for users to navigate through options easily.

- **Precision in Responses:** Leverage NLU to understand nuances in user queries and provide more precise and tailored responses.
- **Dynamic Conversations:** Enable the chatbot to handle more complex and layered queries, allowing for a more dynamic and natural conversation flow.
- **Learning and Adaptation:** Incorporate machine learning to enable SocialSavvyBot to learn from user interactions and continuously improve its understanding of user intents.

Sample Program:

simple example using Python and the spaCy library for basic intent recognition.

```
import spacy

 # Load spaCy English language model

 nlp = spacy.load("en_core_web_sm")

# Define training data with labeled examples

 training_data = [ ("What's the weather like today?", {"intent": "weather_inquiry"}), ("Book a table for two at 7 PM.", {"intent": "table_reservation"}), ("Tell me a joke.", {"intent": "entertainment"})]

 # Add more examples based on your use case
```

```
# Train the spaCy text classification model
 def train_spacy_intent_model(train_data, model=None, n_iter=20):
 if model is None:
model = spacy.blank("en")
text_cat = model.add_pipe("textcat")
 text_cat.add_label("intent")
 train_texts, train_labels = zip(*train_data)
train_cats = [{"intent": label} for label in train_labels]
 train_data = list(zip(train_texts, [{"cats": cats} for cats in train_cats]))
```

```
for i in range(n_iter):
 losses = {} random.shuffle(train_data)
 for batch in spacy.util.minibatch(train_data, size=2):
texts, annotations = zip(*batch)
 example = [] # Update the model with iterating over each text in the batch
 for i in range(len(texts)):
doc = nlp.make_doc(texts[i])
 example.append((doc, annotations[i]))
 model.update(example, drop=0.5, losses=losses)
 print(losses)
```

```
return model

# Train the model

trained_model =
train_spacy_intent_model(training_data)

# Test the trained model

test_text = "Can you recommend a good restaurant?"

doc = trained_model(test_text)

 intent = max(doc.cats, key=doc.cats.get)

print(f"Detected Intent: {intent}")
```

Conclusion:

Remember to keep SocialSavvyBot updated with the latest Facebook features and changes, and periodically analyze user interactions to improve the chatbot's performance and user experience.

Done By

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