



PROJECT TECHNICAL DOCUMENTATION

SOCIALAGENCY
TECH

INDEX

| | |
|-------------------------------------|----------|
| Introduction | 1 |
| Chatbot Requirements | 1 |
| Application Structure | 2 |
| Task Management System | 3 |
| Deployment | 3 |
| Considerations | 3 |



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Introduction

- **Project Name:** Chatbot CreuGroga Salus
- **Date:** 06/06/2024
- **Description:** The Chatbot CreuGroga Salus is a comprehensive healthcare management system designed to enhance patient experience and streamline administrative tasks. This chatbot utilizes Google Cloud services to interact with patients through WhatsApp, leveraging advanced natural language processing capabilities provided by Claude by Anthropic. The system will store all relevant conversational data, making it accessible through a user-friendly frontend interface.

Chatbot Requirements

Messages

1. **Receive and Send Messages on WhatsApp:** Integration with the WhatsApp Business API to manage all patient communications, ensuring secure and efficient messaging.
2. **Send Notifications:** Automated alerts for appointment confirmations, reminders, and other critical updates, improving patient engagement and adherence.
3. **Basic Hospital Queries:** Quick responses to common questions regarding hospital services, visiting hours, contact details, and more.

Appointments

1. **Set and Delete Appointments:** A user-friendly interface allowing patients to book or cancel appointments at their convenience.
2. **Check Doctor Availability:** Real-time access to the availability of specific doctors, facilitating better scheduling.
3. **Unblock/Block Availability:** Admin functionality to manage and adjust doctor schedules, including blocking or unblocking time slots.
4. **Confirm Appointments:** Automated confirmation messages sent to patients to verify their bookings.

5. **Retrieve Appointments:** A feature for patients to view a list of their upcoming appointments.
6. **Change Appointments:** Options for patients to reschedule their appointments easily.
7. **Get Appointment Details:** Detailed information about each appointment, including date, time, doctor, and location.

Authentication

1. **Authenticate Patients via Salus API:** Secure verification of patient identity and authorization using the Salus API.

Application Structure

Backend

1. **Host:** Google Cloud Run - for deploying the backend services in a scalable, serverless environment.
2. **Stack:** Python - chosen for its versatility and robust ecosystem.

Database

1. **Host:** Google BigQuery - used for storing and managing large datasets with powerful querying capabilities.
2. **Stack:** SQL - for structured data storage and retrieval.

Frontend

1. **Host:** To be determined in a future project phase.
2. **Stack:** Django (Python Framework) - chosen for its security features and ability to handle complex data models.

Middleware

1. **WhatsApp:**
 - **Provider:** Twilio WhatsApp Business API - facilitating secure and reliable messaging.
2. **Google Cloud Services:**

- **Cloud Functions:** Handling serverless operations and event-driven tasks.
- **Cloud Storage:** Secure storage solution for data backups and media files.
- **API Gateway:** Centralized management of API endpoints, ensuring smooth communication between different services.

3. Dialogflow CX:

- **Bot Orchestrator:** Manages the overall flow of conversations with users.
- **Intents:** Defines the purposes and goals behind user interactions.
- **Prompts:** Guides users through specific workflows or actions.

Hospital API

1. **Salus API:** Connects the chatbot with hospital systems for accessing patient records, schedules, and other critical data.

Task Management System

- **Jira:**
 - **Team:** Socialagency (CreuGroga) - for tracking progress and managing tasks efficiently.

Google Workspace

1. **Google Meet:** Virtual meetings for team coordination and discussions.
2. **Google Calendar:** Scheduling and timeline management for the project team.

Deployment

- **Timeline:**
 - **Initial Deployment:** Targeted for completion within 1 month.
 - **Full Feature Set:** Expected to be deployed within 2 months.

Considerations

The project documentation is a living document, subject to updates and changes. Adjustments will be made as necessary to accurately reflect the project's evolving scope, requirements, and objectives. We appreciate your flexibility and cooperation as we work towards delivering a robust and efficient chatbot system.

