**Functional and Non-Functional Requirements for the AI-Care Companion Project**

* **Functional Requirements Document for AI-Care Companion**

**1. Introduction**

The AI-Care Companion project aims to provide an innovative healthcare chatbot system that assists users in managing their health by offering personalized information, guidance, and reminders. It leverages cutting-edge technologies like GPT to engage users in meaningful conversations, diagnose symptoms, recommend treatments, and help them adopt a healthier lifestyle. The primary goal is to improve access to accurate health information while maintaining privacy and security.

**2. Functional Requirements**

**FR1. User Profile Management**

* **Description: Each user must have a personalized health profile that contains critical data such as age, gender, medical history, current medications, and other relevant health information.**
* ***FR1:***
  + **Create Account: Users should be able to create an account with basic information such as username, password, and email.**
  + **Manage Profile: Users can update their profile information, including medical history, current medications, and allergies.**
  + **Privacy and Security: Implement robust data encryption and storage mechanisms to protect user data, with secure access only to the user and authorized personnel.**

**FR2. Intelligent Chatbot (GPT Integration)**

* **Description: The chatbot will utilize a GPT model to provide intelligent responses based on the user's profile and symptoms described.**
* **FR2:**
  + **Symptom Assessment: The chatbot will allow users to describe their symptoms, and it will suggest potential conditions, treatments, or actions.**
  + **Personalized Responses: The chatbot will pull data from the user’s profile (e.g., medical history, age) to generate personalized, relevant responses.**

**FR3. Dietary and Exercise Recommendations**

* **Description: The system should provide personalized dietary and exercise recommendations based on the user's health condition.**
* **FR3:**
* **Dietary Suggestions: The system provides customized meal plans for the user based on their health condition.**
* **Exercise Plans: The system provides exercise routines that are suitable for the user's health condition.**

**3. Non-Functional Requirements**

* **Non-functional requirements are those that do not relate to the core functions of the system but focus on the system's quality attributes, such as performance, security, scalability, maintainability, etc. These requirements are essential to ensure that the system operates efficiently and meets user satisfaction.**

**NFR1. Performance Requirements**

* **Response Time: The system should respond to any user inquiry within two seconds for 95% of interactions.**
* **Availability: The system should have an annual availability rate of 99.9%.**
* **Load Handling: The system should be able to handle 1000 concurrent users without significant impact on performance.**

**NFR2. Security**

* **Data Encryption: All sensitive data must be encrypted using advanced encryption techniques such as AES-256.**
* **Access Management: Role-Based Access Control (RBAC) should be implemented in the system.**

**NFR3. Usability**

* **User Interface (UI): The user interface should be simple and user-friendly for all age groups.**
* **User Experience (UX): The system navigation should be intuitive and provide clear instructions to users.**

**NFR4. Maintainability**

* **Code Documentation: The system should be built in a structured and maintainable way for future updates.**
* **Monitoring and Alerts: The system should include monitoring tools to track its status and send alerts in case of issues.**