Software Requirements Specification (SRS) NutriScan Website

1. Introduction

1.1 Purpose

The purpose of the NutriScan website is to provide users with a platform to access the features and functionality of the NutriScan app through a web interface. The website will allow users to scan and interpret nutritional information from packaged food labels, receive personalized health recommendations, and access educational content related to nutrition and healthy eating habits.

1.2 Scope

The NutriScan website will serve as an online platform accessible via web browsers on desktop and mobile devices. It will replicate the core features of the NutriScan app, including food label scanning, nutritional analysis, personalized recommendations, and educational resources.

2. Overall Description

2.1 Product Perspective

The NutriScan website will be a standalone web application that does not depend on external systems or services for its core functionality. However, it may integrate with external nutritional databases or APIs to access additional information about specific food items.

2.2 Product Features

The main features of the NutriScan website include:

- Food label scanning
- Nutritional analysis of scanned food items
- Personalized health recommendations
- Access to educational content on nutrition and healthy eating habits
- User account management
- Privacy and security measures

2.3 User Classes and Characteristics

The NutriScan website is designed for individuals interested in making healthier food choices and improving their nutritional knowledge. Users may vary in their level of nutritional literacy and dietary preferences.

3. Specific Requirements

3.1 Functional Requirements

3.1.1 Food Label Scanning

- The website shall allow users to upload images of food labels from their devices.
- The website shall utilize OCR technology to extract text from uploaded images.
- The website shall identify and extract key nutritional information from the scanned text.

3.1.2 Nutritional Analysis

- The website shall analyze the nutritional content of scanned food items.
- The website shall calculate the percentage of recommended daily intakes for each nutrient based on the user's profile.
- The website shall provide insights into the health implications of the nutritional content.

3.1.3 Personalized Health Recommendations

- The website shall offer personalized recommendations based on the nutritional content of scanned food items and the user's profile.
- The website shall suggest adjustments to the user's diet to meet recommended nutritional goals.

3.1.4 Access to Educational Content

- The website shall provide access to educational resources on nutrition and healthy eating habits.
- The website shall offer articles, videos, and infographics covering topics such as macronutrients, micronutrients, portion control, and meal planning.

3.1.5 User Account Management

- The website shall allow users to create and manage their accounts.
- The website shall store user profiles securely and allow users to update their information as needed.

3.1.6 Privacy and Security Measures

- The website shall implement measures to protect users' privacy and ensure the security of their data.
- The website shall comply with relevant regulations such as GDPR and COPPA.

3.2 Non-Functional Requirements

3.2.1 Performance

- The website shall provide a responsive user interface with minimal latency.
- The website shall handle concurrent user sessions efficiently.

3.2.2 Usability

- The website shall have an intuitive and user-friendly interface.
- The website shall be accessible on a wide range of devices and screen sizes.

3.2.3 Reliability

- The website shall be reliable and stable, with minimal downtime or errors.
- The website shall handle errors gracefully and provide helpful error messages to users.

3.2.4 Compatibility

- The website shall be compatible with modern web browsers such as Google Chrome, Mozilla Firefox, and Safari.
- The website shall support accessibility features for users with disabilities.

4. External Interface Requirements

4.1 User Interfaces

- The website shall have an intuitive and visually appealing interface for users to interact with.
- The website shall incorporate responsive design principles to ensure usability across different devices and screen sizes.

4.2 Hardware Interfaces

- The website shall utilize standard web technologies and shall not require any specific hardware components.

4.3 Software Interfaces

- The website may integrate with OCR libraries or APIs for text extraction and nutritional analysis.
- The website may integrate with external nutritional databases or APIs for additional information about food items.

5. Other Requirements

5.1 Legal and Regulatory Requirements

- The website shall comply with applicable laws and regulations related to data privacy, security, and consumer protection.
- The website shall display appropriate disclaimers and terms of use to users.

5.2 Documentation Requirements

- The website shall provide user documentation, including tutorials and FAQs.
- The website shall maintain developer documentation for future reference and maintenance.