**Software Requirements Specification (SRS) Document**

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# Brief problem statement

# Malnutrition is a major issue in rural India affecting young children. Severe malnutrition can cause stunted growth and early death. The current method of tracking malnutrition is laborious. A new method involves using a camera to measure height and weight. The data is used to monitor malnutrition and longitudinal growth.

# Users profile We have identified two user groups that the program will be used by:

# 1. Ground personnel, in charge of capturing the photos and updating estimates as necessary. They will be on ground workers of the organizations.

# 2. System administrator, who will be in-charge of system upkeep and has access to data compiled by all ground workers. He will be keeping track of the data for further study.

# Project Modules 1. Frontend / User Interface: Web application the end users and administration will have direct access to. This will contain all features and functionality of the project.

2. Backend / API: The processing, storage and study of the data provided will be done here, using sophisticated algorithms.

**Feature requirements (described using use cases)**

1. Frontend / User Interface:
   1. Regular Ground Personnel Application:
      1. Basic UI.

Basic React based Application UI built for calibration, uploading data and viewing of results.

* + 1. User registration.

User registration UI / form for registering new patients / persons. This registration will be used to keep track of person’s malnutrition status over time.

* + 1. Device Calibration.

Calibrating the device using images of the reference (checker pattern) with pictures from known heights.

* + 1. Uploading data.
       1. Form for identifying / choosing patient / person giving data.

User form for filling details on who is giving the data. This will used to identify the person in each upload, after their initial registration.

* + - 1. Uploading image.

Uploading the input image from device or taking a picture from within the web application.

* + 1. Displaying results.

Displaying the malnutrition status received from the backend / API post processing. This result will be used to decide person’s status at current period.

* 1. Administration Application:
     1. All features and functionalities of the Regular Ground Personnel Application.
     2. Admin Access.
        1. Admin authentication.

Form / Login of the admin for authenticating admin to all uploaded data from the server.

* + - 1. Retrieving data.

UI for the admin to retrieve historical data of all people using the web application. This data will be used to track malnutrition status of the patients / users over time and provide feedback on their nutritional status.

1. Backend / API:
   1. Getting input.

Get input image and other data from the web application to the server.

* 1. Processing input.
     1. Estimating height.

Using sophisticated algorithms to estimate the height of the person using the image received.

* + 1. Finding weight.

Using sophisticated character recognition algorithms/methods to find the weight of the person.

* + 1. Processing data.

Generating malnutrition status of the person using the height and weight computed.

* 1. Storage and response.

Storing the calculated results in server and sending back the results as API response.

* 1. Admin access.
     1. Admin authentication.

Authenticate the device based on the admin credentials given.

* + 1. Retrieving data.

Retrieving all users data based on admin requests, and sending data as API response.