System Requirements Specifications

Project “Memories”

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1. Introduction

1.1. Purpose of this document –

This document has been written to better describe the functional and non-functional requirements of the project. And to better understand how the final version of the product might look like, including the user interface, the process layout, and the required features.

1.2. Scope of this document –

The product which we aim to develop is called “Memories” which will be a photo-saving, and organising app. The application of this software will be primarily to those users who click many pictures, and have trouble organising them manually. The app will also be useful to those who would want to revisit their old photographs as it will periodically show old photos.

1.3. Overview –

This SRS contains a high-level overview of the product, describing what the final product might contain, room for expansion, and other requirements that the product must fulfil.

2. General description –

Most smartphones today carry upwards of 100GB of secondary memory in them [1]. Considering just a 10% of this capacity, i.e., 10GB is enough to store 2000 photos, taken by an average smartphone camera at 12 Megapixels. This sheer quantity of photos makes it incredibly hard to sort through these photographs.
At the same time, the memory spent in storing photos on a smartphone can much better be used in storing other data, such as video, applications, etc. which take exponentially more space. Users who need photographs of a particular person find it especially hard to find these photographs. Moreover, the prime reason of clicking a photograph – to capture a memory – is often lost, as most people do not look at their phone gallery often.
Therefore, our product will contain facial recognition system, automatic preview of old photos, and storage in cloud to combat these problems.

3. Functional Requirements

The product needs to contain a few major components:

3.1. Face Recognition System – A face recognition system is necessary in order to organise the photographs in an orderly manner. Further, sorting options within the groups may be included.

3.2. Storage System – A storage system in the cloud is necessary to offload the burden of photos from mobile phones to dedicated servers.

3.3. Authentication System – An authentication system is required in-order to ensure that photos of one user do not get accessed by some other user.

3.4. Old Photo Preview System – Old photos will be automatically previewed after fixed intervals.

4. Interface Requirements

4.1. The authentication page of the app will contain an authentication screen that will communicate with the servers to ensure that correct users have logged in.

4.2. The main page of the app will contain photographs arranged in a grid like format, with their names at the bottom.
4.3. Clicking on an image will enlarge the image, and right clicking will allow for options such as delete, and rename.
4.4. A separate tab will be provided where the user can look at the photos organised according to the people recognised in the photograph.

5. Performance Requirements

5.1. The authentication should be near-instantaneous, taking less than 1 second.
5.2. Loading images can be a cumbersome task, therefore its speed is limited purely by the user's internet connection.
5.3. Create and rename functions should be done in parallel to make them appear seamless.
5.4. The product needs primary memory to store currently loaded images, therefore should be able to consume as much memory as required.
5.5. The facial recognition component may take some time to process each photo depending on the resolution & size of the image, however should be able to process one photo in less than 10 minutes.

6. Non-Functional Attributes

6.1. It is expected that no matter what, the images stored should not be deleted without a user's consent, hence reliability is important.
6.2. The data should not be corrupted under any circumstance.
6.3. The data should be secure, as the photographs of a user can be extremely private.
6.4. Speed of loading images should be fast.
6.5. The face classification should be accurate, and false positives and negatives should be minimised.