Chapter 3

SYSTEM REQUIREMENTS SPECIFICATION

3.1 Overview

This document provides the basic requirements of the system to be fully functional. Here we outline the minimal hardware and software requirements for setting up this project which can be used to demonstrate how to recognize Kannada character from the image and convert it into Latin Kannada script. For example - If we consider any image with contains Kannada character say 'neer', so our application will first recognize character 'neer' written in Kannada language and then convert it in the form of Latin script.

3.2 System Requirements

This document gives the necessary instructions for fulfilling the requirements of deploying the project.

3.2.1 Hardware Requirements

Hardware requirement specifications are technical descriptions of the hardware components and used in the project.

Following are the hardware required in this project:-

1. Computer supporting MATLAB R2017a (9.2.0.538062)

2. Camera or mobile phone to capture image of format supported by specified MATLAB version.

3.2.2 Software Requirements

A software requirement specification describes about the software that we have used. Along with it includes use case for user interactions and also functional and non-functional requirements.

Following are the software requirements in this project:-

1. Operating system   : Windows/Linux/MAC.

2. Coding language   : MATLAB.

3. IDE   : MATLAB R2017a (9.2.0.538062)

3.2.3 Interface Requirements

User: User should use a camera or a mobile phone to capture the image. User need to transfer the image in the system supporting MATLAB R2017a and are able to get Kannada character in the form of Latin script.

3.2.4 Product Requirements

3.2.4.1. Usability Requirements

The GUI of the application should be user friendly. There should be ease in understand the steps the need to be followed to get the Latin script. This should able to choose picture from the folder just by one click and further steps need to done easily without any difficulty.

3.2.4.2 Reliability Requirements

Application should be reliable enough so that user don't have to face any unexpected result during the execution and also it should not put user in situation where user is unable to understand necessary steps to be taken to handle failure.

3.2.4.3 Efficiency Requirements

3.2.4.3.1. Performance

Performance of the application is measured using the percentage of character the application is able to recognize the time taken by it in the compilation of task. Performance can be measured in three aspects like Recognition rate: The portion of image that is been identified correctly. Rejected rate: The portion of image that is not been identified correctly.

3.2.5 External Requirements

3.2.5.1. Privacy

The application should not reveal user personal data and also should not fetch any information contained in the computer system. It should only perform the task of browsing the stored image and convert it into Latin script.