Software Requirements Specification

for

Fashion Recommender System

Version 1.0 approved

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07-02-2020

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Revision History

Name	Date	Reason For Changes	Version
Fashion recommendation team	07-02-2020		1.0

1. Introduction

1.1 Purpose

The goal of the project is to develop an intelligent fashion recommender- the system will take an image of any fashion product and will be able to recommend similar fashion products available in the inventory based on a similarity ranking. The system will consider current fashion trends in social media while recommending.

In addition it will consider some user specific data for personalization purposes. For example, if a user doesn't like the color yellow then don't recommend a product of that color. And also the size of the dress or shoe to match with the user.

1.2 Intended Audience and Reading Suggestions

This is a on job training project.So the intended audience is the mentor of the projects. It will be also read by project team members.

1.3 Product Scope

- The product is Fashion Recommender. It provides a UI through which the user can see all the inventory products. If a user selects one inventory item then the system recommends all the similar products. The recommendations are shown in the UI.
- Users can also upload an image of a product and search for the similar products.
- User can also provide some filters for their recommendation

1.4 References

IEEE SRS Format

1.5 Technologies to be used

- Python 3:Python is a high-level, interpreted, interactive and object-oriented scripting language.
- Tensorflow:TensorFlow is a free and open-source software library for dataflow and differentiable programming across a range of tasks. It is a symbolic math library, and is also used for machine learning applications such as neural networks.
- Keras: Keras is an open-source neural-network library written in Python. It is capable of running on top of TensorFlow, Microsoft Cognitive Toolkit, R, Theano, or PlaidML. Designed to enable fast experimentation with deep neural networks, it focuses on being user-friendly, modular, and extensible.
- Flask: Flask is a web framework. Flask provides tools, libraries and technologies that allow you to build a web application.

- Angular 8: Angular is an app-design framework and development platform for creating efficient and sophisticated single-page apps.
- Anaconda: Anaconda is a free and open-source[6] distribution of the Python and R programming languages for scientific computing that aims to simplify package management and deployment.
- Pycharm Community Edition IDE: PyCharm is an integrated development environment (IDE) used in computer programming, specifically for the Python language.
- Visual studio Code:The Visual Studio integrated development environment is a creative launching pad that you can use to edit, debug, and build code, and then publish an app. An integrated development environment (IDE) is a feature-rich program that can be used for many aspects of software development.
- Jupyter Notebook:The Jupyter Notebook is an open source web application that you can use to create and share documents that contain live code, equations, visualizations, and text.

1.6 Overview

The rest of this SRS is organized as follows: Section 2 gives an overall description of the software. It gives what level of proficiency is expected of the user, some general constraints while making the software and some assumptions and dependencies that are assumed. Section 3 gives specific requirements which the software is expected to deliver. Functional requirements are given by various use cases. Some performance requirements and design constraints are also given.

2. Overall Description

The context diagram in Figure 1 gives a brief overview of the Fashion recommender Systems interactions with all the users in the system.

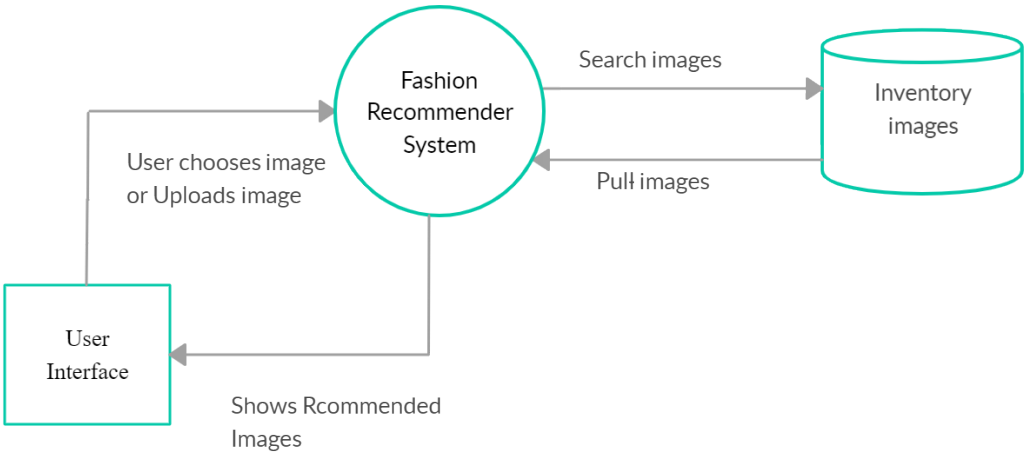

Figure 1:Context diagram for Fashion Recommender System

The following subsections give a brief overview of the background of the Fashion Recommender system and some aspects that affect the system and its requirements

2.1 Product Perspective

The Fashion recommender system is a Machine learning(Deep learning) system with Angular User Interface.

2.2 Product Functions

Fashion Recommender System is a simple recommendation system for fashion products.Following are a list of some of the functionalities that the system will provide:

1. Choosing an image.
2. Uploading an image
3. Finding the recommendations for inventory products or outside ones.

2.3 User Classes and Characteristics

User: Customers
Functions: User chooses an image or uploads an image of a product. Users can choose some constraints for the recommendations.

2.4 Operating Environment

It is a web application that can run on any desktop on any OS.

2.5 Constraints

- The system shall not store nor publish customer's information.
- The system shall be able to run on any platform.

2.6 Assumptions and Dependencies

- Fashion recommender system will support 1000 users at a time.
- Fashion recommender system will be accessible from any browser.

3. External Interface Requirements

3.1 User Interfaces

The user interface is an angular application. With this UI, customers should be able to upload and explore the products images and also search the recommended images.

3.2 Software Interfaces

- Name: MySQL Database
  Version No: MySQL 5.7
  Source: MySQL

- Name: Google Chrome
  Version No: 81.0.4
  Source: Open source

- Name: Angular
  Version No: 8
  Source: Open source

- Name: Flask
  Version No: 1.1.2
  Source: Open source

- Name: Flask
  Version No: 1.1.2
  Source: Open source

- Name: Pycharm
  Version No: N/A
  Source: Jetbeans

- Name: Anaconda
  Version No: 3
  Source: Open source

- Name: Visual Studio Code
  Version No: 1.44
  Source: Microsoft Corporation

- Name: Jupyter notebook
  Version No: N/A
  Source: Open source

- Name: Ubuntu
  Version No: 18.10
  Source: Canonical Ltd

4. System Features

4.1 Selecting a product image

Title	Select an image
Description	All users can select the inventory images.
Rationale	All users can select an image to search similar products.
Assumptions	N/A
Constraints	N/A

4.2 Upload an image

Title	Upload image
Description	All users can upload product images.
Rationale	All users can select an image to upload product images to get recommendation
Assumptions	N/A
Constraints	N/A

4.3 Select features

Title	Select features
Description	All users can select features to filter.
Rationale	All users can select features for filtering out their search. This isn't mandatory
Assumptions	N/A
Constraints	N/A

4.4 Search

Title	Search for recommendation
Description	All users can search for recommendations.
Rationale	All users can search for recommendations.When a user searches for it, the page is populated with the recommendations.
Assumptions	N/A
Constraints	User needs to upload an image or select any feature. If not the search returns all the items.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

- The system should work for any number of users

5.2 Security Requirements

- The system should not record any data of it's users

5.3 Software Quality Attributes

- The system should perform its operations and functionalities without any crash.
- The system should be available all the time.

5.4 Business Rules

In our software we intend to show the best recommendations for a better user experience. In business sense, that is very useful and productive.

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