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COLLEGE OF COMPUTING AND INFORMATION SCIENCES

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BACHELOR OF SCIENCE IN SOFTWARE ENGINEERING (YEAR 2)

RECESS TERM 2 (BSE 2301)

SOFTWARE REQUIREMENTS SPECIFICATION FOR:

**STARWARS MOVIE SCRIPT ANALYSIS PROJECT**

**PROJECT MEMBERS (GROUP 24)**

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Software Requirements Specification

for

Star Wars movie Script Analysis

Version 1.0 approved

Prepared by Group 24

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Revision History

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
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# Introduction

## Purpose

The software product is a movies analysis for the Star Wars movie episodes from episodes four up to episode six. This SRS is for the text mining model of the whole system that is to be built. Only the movie scripts are going to be considered for the information.

## Document Conventions

This SRS was written with all the letters having a font size of 12 and in having the font type of Arial. All the titles and subtitles are in bold with point numbers on the subtitles.

## Intended Audience and Reading Suggestions

This is document is intended for the developers and the project managers. The marketing stuff, the users, testers of the software and document writers are included in the intended audience of this document.

## Product Scope

This product is to cover the Star Wars movie episodes IV, V, VI. Information will be extracted from these three episodes of the movie. The text from the movies’ script is going to be the data source from which we are going to mine information. With this product, one will be able to tell how positive, negative, or neutral the movie is. This information shall in turn help the movie script writers to improve on their writing.

## References

# Overall Description

## Product Perspective

This product is based on the movie analyses that have already been around. But this product is to make the analysis specific to Stars Wars movie episode and easier.

The components within the software shall be highly cohesive. They shall be lightly dependent on each other.

## Product Functions

The product is to have a function to analyze data set.

The product is to have a function to cluster and categorize text from the script.

The product is to have a function that produce sentiment analysis on the text data.

The other function is that responsible for the different visualization of the information generated from the movie scripts.

To classify information.

## User Classes and Characteristics

Developers;

Advanced knowledge in R programming language.

Knowledge about the Star Wars data set

Knowledge in data analysis

Project Manager;

Star Wars dataset knowledge.

Expert knowledge in data analysis.

Script writers

Knowledge about the Star Wars script.

Movie Directors.

Knowledge about Star Wars

Star Wars viewers/ fans

Knowledge about Stars Wars franchise.

## Operating Environment

The Star Wars data set software shall operate on 64 and 32 bit Windows operating systems from Windows 7 version and above. The software also runs Linux operating system such as backtrack, mint, kali Linux etc.

The software runs in R and will also run on all the available browsers.

## Design and Implementation Constraints

* Star Wars analysis software shall be delivered with; User manual, tutorials on how to use the software.
* All documentation shall follow IEEE documentation standards

## User Documentation

* We shall use a Star Wars dataset that was availed by a third party, any errors within the dataset could affect the analysis process hence affecting information provided by the software.

We shall use available predefined libraries to build the software such as Shiny, Rweka, Caret, Word cloud.

## Assumptions and Dependencies

* We shall use a Star Wars dataset that was availed by a third party, any errors within the dataset could affect the analysis process hence affecting information provided by the software.
* We shall you available predefined libraries to build the software such as Shiny, RWeka, Caret, Word cloud.

# External Interface Requirements

## User Interfaces

The product has a user interface that is designed in English language with many others graphics for interaction with the system by the user.

## Hardware Interfaces

The product has no external hardware interfaces apart from the platforms mentioned in its design document.

## Software Interfaces

The product has no software interfaces required.

## Communications Interfaces

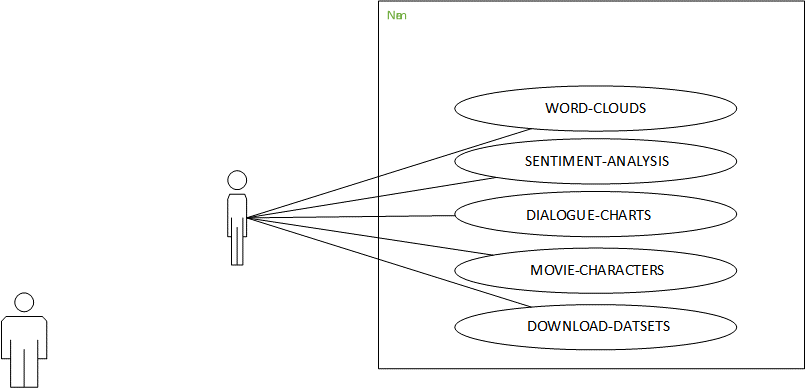
The product is to use HTTP and FTP for transmitting information. For those who may require to download the datasets of the product will use the FTP.

# System Features

**User Case diagram**

**Fig 1.1**

Word clouds



## Negativity feature

**4.1.1 Description and Priority**

This is the feature of the product where the user will know the percentage of negativity in the different episodes of the Star Wars movie. This is a high priority feature because the user shall depend on it for decision making.

**4.1.2 Stimulus/Response Sequences**

The user will have to only click and select the negativity button and select the episode he/she wants to know about. Then the system will display the information accompanied with charts to summarize what the user will be seeing.

**4.1.3 Functional Requirements**

REQ-1: R

The user should have R installed on the device he/she is using for this feature to work. For the displaying of the information wanted, one must have a server turned on in order to view the results in a browser.

REQ-2: R Studio

The user should have RStudio installed on the device he/she is using in order to smoothly run the code of the program and also view results as alternative for the browser.

## Positivity feature

**4.2.1 Description and Priority**

This is the feature of the product where the user will know the percentage of positivity in the different episodes of the Star Wars movie. This is a high priority feature because the user shall depend on it for decision making.

**4.2.2 Stimulus/Response Sequences**

The user will have to only click and select the positivity button and select the episode he/she wants to know about. Then the system will display the information accompanied with charts to summarize what the user will be seeing.

**4.2.3 Functional Requirements**

REQ-1: R

The user should have R installed on the device he/she is using for this feature to work. For the displaying of the information wanted, one must have a server turned on in order to view the results in a browser.

REQ-2: R Studio

The user should have RStudio installed on the device he/she is using in order to smoothly run the code of the program and also view results as alternative for the browser.

## Scenes feature

**4.3.1 Description and Priority**

This is the feature of the product where the user will select the scene he/she wants to know about. The user will be able to know the actors involved in the scene and a summary of what is taking place in the specific scene and how negative or positive it is.

**4.3.2 Stimulus/Response Sequences**

The user will have to only click and select the scene of his/her choice and view the above mentioned information about the scene.

**4.3.3 Functional Requirements**

REQ-1: R

The user should have R installed on the device he/she is using for this feature to work. For the displaying of the information wanted, one must have a server turned on in order to view the results in a browser.

REQ-2: R Studio

The user should have RStudio installed on the device he/she is using in order to smoothly run the code of the program and also view results as alternative for the browser.

## Character feature

**4.4.1 Description and Priority**

This is the feature of the product which enable the user to know all the characters that were in all the episodes, and also in a specific episode. This feature will also show the user the characters’ status; either positive or negative.

**4.4.2 Stimulus/Response Sequences**

The user will have to only click and select the episodes to know the actors that were involved in the cast and also know their status.

**4.4.3 Functional Requirements**

REQ-1: R

The user should have R installed on the device he/she is using for this feature to work. For the displaying of the information wanted, one must have a server turned on in order to view the results in a browser.

REQ-2: R Studio

The user should have RStudio installed on the device he/she is using in order to smoothly run the code of the program and also view results as alternative for the browser.

# Other Nonfunctional Requirements

## Performance Requirements

The system to be developed shall reduce costs, save time, conserve resources and will improve on the efficiency of analyzing the movie episodes with great graphics and visualization of the information. The system will be responding to the stimulus with in 0.5s.

## Safety Requirements

The user of the product should not delete or tamper with the data set already provided for analysis with in the program.

The user should use the available functions provided by the interface in order to produce the desired outcomes without any errors occurring.

## Security Requirements

For this product, the is no user authentication that is required. Any interested user can use the product without first providing their initials.

## Software Quality Attributes

The product has a very simplified graphical user interface which is designed in English for easy readability.

The product has functions that are highly cohesive, this means that most of the product’s functions are reusable.

The system can be functional from the moment it is started up to when it is exited without any malfunctioning.

## Business Rules

All users have the same level of access, with no restrictions. All users have access to all the functions of the system.

# Other Requirements

This software will require the user to also have the following packages installed in RStudio on his/her device; shiny, RWeka, Word cloud.

Appendix A: Glossary

Stimulus: Action of the user to the system

Appendix B: To Be Determined List

<Collect a numbered list of the TBD (to be determined) references that remain in the SRS so they can be tracked to closure.>