Software Requirements Specification
Identif.ai

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1 Introduction

1.1 Purpose

The purpose of this document is to give a detailed description of the requirements and specifications for the Identif.ai application. It will explain the purpose, features, requirements and related considerations of the system. This document is intended for developers and stakeholders for the project.

1.2 Scope

Identif.ai is a mobile application that identifies television and movie celebrities. When a user wants to identify an unknown *celebrity*, they simply need to input a picture, an audio clip, and/or a small description into the application. The application will then take these three inputs and provide the user with information about the *celebrity*.

The application uses an image expert, an audio expert, and a description expert to provide the pertinent information about the *celebrity* to the user. The goal is to provide accurate information in a minimal amount of time.

1.3 Definitions, Acronyms, and Abbreviations

Term	**Definition**
API	Application Program Interface.
Application	Refers to the Identif.ai Android Application.
Celebrity	Refers to a type of search result that is focused on for this application.
Input	Refers to either a text entry input, video upload and/or image upload.
Search Result	A list of individuals matching the search criteria of a user.
System	Refers to the Identif.ai Android Application.
User	Refers to the person using the Identif.ai application.

1.4 References

N/A

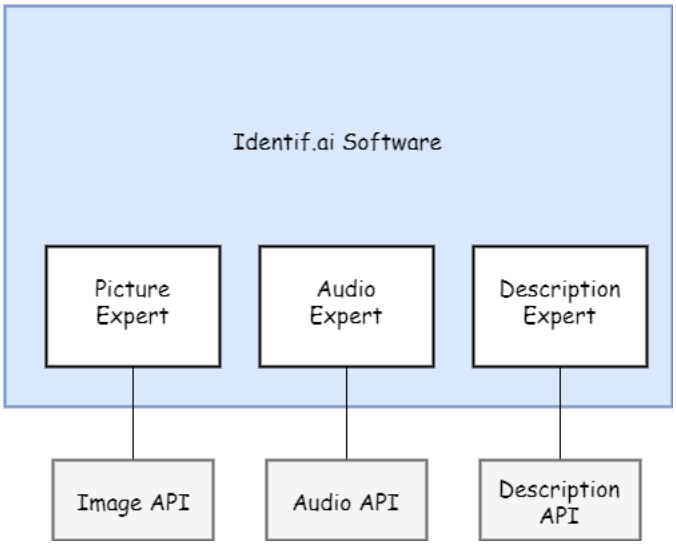
1.5 Overview

The rest of the document examines the product's specifications in detail. Section 2 is the Overall Description which provides an overview of the general factors that affect the product. Section 3 details the Functional Requirements, where all the behavioral requirements are outlined in detail for the developers. Lastly, Section 4 describes the Non-Functional Requirements, the quality attributes that the *system* should have.

2 Overall Description

2.1 Product Perspective

The application is a new, self-contained product that does not replace or follow from an existing system. However, Identif.ai is largely dependant on leveraging several API calls to aid in the identification process. As mentioned earlier, the *system* consists of three different experts (which can be thought of as subsystems) that will each independently attempt identification of the subject.



2.2 Product Functions

Identif.ai will allow the *user* to identify a person of note using a combination of three inputs: a picture, an audio clip and a text description. The application will then return a list of the closest matches based off the inputs. The user can choose to use any or all of the three inputs. The likelihood of the application correctly identifying the *celebrity* will increase with more inputs used. After the search has concluded, the user can choose to save their result or share it on social media. The application will support sharing via Facebook, SMS or Twitter.

2.3 User Characteristics

This application is made for all ages groups. The users must be able to download and navigate through the application. Furthermore, the application also asks the user to provide typed input, so the user must be able to provide general information about the celebrities. The user does not need any formal knowledge about the *celebrity* they are searching for.

2.4 Constraints

Constraint	Description
Operating Device	The application shall operate on all Android Devices running API 23 or higher.
Monetary	The application will cost $0
Time	The application must be available by April 06, 2018

2.5 Assumptions and Dependencies

It is assumed that the user's mobile device will have a method of text input, a functioning camera with a quality of at least 5 megapixels and a functioning microphone. The application is dependant on the user having an internet connection of reasonable speed. The application is also dependant on the use of several APIs, including Google's Cloud Vision API and The Movie Database API.

2.6 Apportioning of Requirements

N/A

3 Functional Requirements

VP1 Application User

BE1.1 Wants to identify a celebrity

i. The application will allow the user to enter information through the Android device keyboard.

ii. The application will take in sound, video, photo input.

iii. The application will prompt an error message if there were any issues with obtaining media

iv. The application will return a list of potential individuals matching search criteria

v. The application will be able to identify at least 2 individuals if the user attempts to search for multiple individuals in a search.

vi. The application will give a message to the user if the celebrity is not found

BE1.2 Wants to enter multiple forms of data

i. The application will allow more than one type of media entry.

ii. The application will allow the user to select the forms of entry they want to input

BE1.3 Wants to access existing media from device

i. The application will retrieve permission from user prior to accessing media and camera.

BE1.4 Want to learn more about an individual that is searched

i. The application will allow the users to view more details for an individual they have search by external sources.

BE1.5 Wants to save the search

i. The application will allow the use to save the search

ii. The application will give the user an option to save the search

BE1.6 Wants to delete saved search

i. The application will allow user to deleted saved searches

BE1.7 Wants to share search results

i. The application will allow each search result to be shared through Facebook, SMS, and Twitter.

4 Non-Functional Requirements

4.1 Look and Feel Requirements

4.1.1 Appearance Requirements

LF1 The application will have a minimum font size of 14 scale-independent pixels.

4.1.2 Style Requirements

LF2 The product shall be deemed professional and trustworthy in appearance by 80% of sample users.

4.2 Usability and Humanity Requirements

4.2.1 Ease of Use Requirements

UH1 It is possible to reach any given system function from the main window within 8 button clicks.

UH2 The application shall be deemed intuitive and consistent in design by 80% of sample users.

4.2.2 Personalization and Internationalization Requirements

UH3 The application will be usable by any English speaking user with a minimum of a 5th grade Canadian reading level.

4.2.3 Learning Requirements

UH4 Users who have no training shall be able to successfully complete a search for an actor within one minute.

4.2.4 Understandability and Politeness Requirements

UH5 The application shall hide details of its construction from the user.

4.2.5 Accessibility Requirements

UH6 The contrast ratio between the background colour and text colour shall be at least 4.5 for text of size 14 scale-independent pixels and 3 for any larger text as per Web Content Accessibility Guidelines.

4.3 Performance Requirements

4.3.1 Speed and Latency Requirements

PR1 The response time of this application shall not exceed 0.5 seconds.

PR2 The processing time of this application shall not exceed 1 second.

4.3.2 Safety-Critical Requirements

PR3 Use of the application shall not harm or threaten the safety of any users as long as it is used within a non-safety critical environment.

4.3.3 Precision Requirements

PR4 The accuracy of identification shall not be below than 90%.

4.3.4 Reliability and Availability Requirements

PR5 The application shall having a maximum crashing rate of 1 occurrence per 100 searches.

4.3.5 Robustness and Fault-Tolerance Requirements

PR6 The application shall reinitialize instead of freeze when there is no response.

4.3.6 Capacity Requirements

PR7 At least 50% of the processor capacity and storage space available to the *system* shall be unused at peak load.

4.3.7 Scalability or Extensibility Requirements

N/A

4.3.8 Longevity Requirements

PR8 The application shall stay fully functional for at least 5 years from deployment.

4.4 Operational and Environmental Requirements

4.4.1 Expected Physical Environment

N/A

4.5 Requirements for Interfacing with Adjacent Systems

OE3 The transition between the application and the system shall be smooth.

4.5.1 Productization Requirements

OE4 The software's code shall be made to be legible, open sourced and follow best practices.

4.5.2 Release Requirements

OE5 The application shall meet any release requirements on Google Play Store.

4.6 Maintainability and Support Requirements

4.6.1 Maintenance Requirements

MS1 A new feature and the code must be able to be added to the product within 12 hours.

MS2 A software developer with 6 months experience will be able to correct any known defect in less than two days.

4.6.2 Supportability Requirements

MS3 The application shall be stable on Android 7 or higher.

4.6.3 Adaptability Requirements

MS4 The application shall be able to run on any Android device.

4.7 Security Requirements

4.7.1 Access Requirements

SR1 The application shall make a request before accessing the user's photo library.

4.7.2 Integrity Requirements

N/A

4.7.3 Privacy Requirements

SR2 The application shall not store the user's data.

4.7.4 Audit Requirements

N/A

4.7.5 Immunity Requirements

N/A

4.8 Cultural and Political Requirements

4.8.1 Cultural Requirements

CP1 The application shall not use any pictures or icons that could be considered offensive in any country where the application is launched.

4.8.2 Political Requirements

N/A

4.9 Legal Requirements

4.9.1 Compliance Requirements

LR1 The application shall comply to the the Personal Information Protection and Electronic Documents Act.

4.9.2 Standards Requirements

LR2 The application shall obey Google Play Store standards.

5 Division of Labor

Name	Contribution	Signature
Alex Nguyen	Functional Requirements	
Junni Pan	Non-Functional Requirements	
Sullivan Stobo	Latex Final Copy	
Tommy Tran	Leader, overlooked and ensure consistency in project.	
Shalmi Patel	Introduction	