

Software Requirements Document

Project Information	
Project Name	ARcardapp
Project Owner	Lauren Keenan
Version	1.0
Date	09.12.24

1. Introduction

This document is for outlining the requirements for the development of the ARcardapp application. It will define and communicate the requirements of the software and guide the development team to ensure that necessary features and functionalities are implemented. It will be used as a point of reference for everyone actively involved in project development, to discuss and agree upon key project deliverables.

2. Scope

The scope of ARcardapp includes the following:

- Android app that runs an Augmented Reality User Interface (AR UI)	...
- App scans an image to present a 3D AR Avatar	...
- Avatar "reads aloud" card-issuers LinkedIn profile data	...
- User can contact card-issuer via AR UI	

3. Functional Requirements

3.1 QR code redirects to App-listing in Google Play Store

- Requirement 1.1: A QR code is made for the Application listing within Google's playstore
- Requirement 1.2: The code redirects the user to download the Application from the playstore

3.2 App scans an image and presents a 3D AR avatar

- Requirement 2.1: Application should have an AR library integrated
- Requirement 2.2: Application should have an installed 3D avatar to use
- Requirement 2.3: Application should scan a specific image that triggers the AR event

3.2 Avatar "reads aloud" card-issuer LinkedIn profile data

- Requirement 3.1: App needs access to retrieve LinkedIn profile data
- Requirement 3.2: App needs access to IBM's WatsonX Artificial Intelligence (AI) suite
- Requirement 3.3: Application should use both services to create an event where Watson audio files play in-tandem with 3D Avatar event.
- Requirement 3.4: App organises and disseminates LinkedIn data in categories (e.g. "About me", "work history" etc..)
- Requirement 3.5: App can respond to different user queries via different AR UI components

3.3 End-user can contact the card-issuer via application

- Requirement 4.1: Application should contact the card-issuers LinkedIn profile, or email address from user instruction in the AR UI

4. Non-Functional Requirements

- Requirement 4.1: UI should be uncomplicated, simple and intuitive to use
- Requirement 4.2: App should be Human Computer Interaction (HCI) compliant
- Requirement 4.3: Application should reliably and consistently respond to user requests
- Requirement 4.4: App should be able to serve several users without service degradation
- Requirement 4.5: App should be performant and resource-efficient, as a lightweight Android application

5. User Interface Design

- Design Requirement 1: Should use customer research to inform an intuitive UI layout
- Design Requirement 2: A buttons purpose should be recognisable to the user and use standard icons where possible
- Design Requirement 3: UI layout should contain as few components as the app functionality allows, while still remaining functional

6. System Architecture

- Architecture Requirement 1: Application should run in Unity, on Android devices
- Architecture Requirement 2: LinkedIn profile data should be retrieved from www.Linkedin.com official domain
- Architecture Requirement 3: WatsonX text-to-speech (TTS) data should be retrieved from IBM cloud official domain

7. Data Requirements

- Requirement 7.1: LinkedIn Profile data should be accessed legally and through a reputable source
- Requirement 7.2: Data should be organised and presented coherently
- Requirement 7.3: Data must be stored securely in-app to prevent unauthorized access
- Requirement 7.4: Data should remain unchanged and accurate from its collection to its use
- Requirement 7.5: WatsonX TTS should be used to convert LinkedIn data into audio

8. Security Requirements

- Requirement 8.1: Common vulnerabilities for used technologies should be identified
- Requirement 8.2: Application should store and use data in accordance with GDPR
- Requirement 8.3: Application source code should be stored securely and have integrity
- Requirement 8.4: Data should be handled securely and safely throughout its use in the application

9. Performance Requirements

- Requirement 9.1: App must run on most Android devices and be resource efficient
- Requirement 9.2: Application should respond in 2 seconds under normal loads and 5 seconds under peak loads.
- Requirement 9.3: App should use as little API traffic as is necessary to achieve full functionality.
- Requirement 9.4: The system should function in perpetuity, with service interruptions clearly communicated beforehand
- Requirement 9.5: The system should consistently function even in abnormal conditions.

10. Testing Requirements

- Requirement 10.1: Each function should be tested to ensure it functions as expected
- Requirement 10.2: API interactions should be integration tested to ensure correct data-flow within the software

Project Stakeholders	
	<ul style="list-style-type: none">Jon McNamara (card-issuer/client)Marta Grazia (card-issuer/ Developer)Desislava Todorova (card-issuer/ client)Development Team (team members)Lauren Keenan (project lead)End users (clients)Delivery Staff (executives)UHI (organization)

11. Project Timeline

Task	Start Date	End Date
Research & discovery	08.10.25	25.10.24
Release 1: App scans target, triggers Avatar	29.10.24	05.11.24
Release 2: Watson TTS with LinkedIn data	05.11.24	17.01.25
Release 3: Build contact card-issuer feature	20.01.25	03.03.25
Project close/ Explore additional features	03.03.25	25.04.25

Revisions

Version	Date	Description	
	1.0	09.12.24	Initial version
1.1	[Date]		Updated functional requirements

Signatures

Project Owner: _____Lauren Keenan_____

Manager: _____