

Mr. Bear - User Requirements

Users

The Mr. Bear system will have 2 distinct user types.

University of Alberta Visitor (visitor)

The primary user of the Mr. Bear system will be a visitor to the University of Alberta. They will interface with system through the Mr. Bear smart phone app. They will use the app primarily as way of finding their way around and getting information about campus.

Mr. Bear System Administrator (admin)

While active, the Mr. Bear system will have to updated with new campus data as the campus grows and changes. This user will interface with the system through a web application or other personal computer interface and will modify the Mr. Bear data.

Functional Requirements

Ref#	Requirement
1.1	Match a picture to a set of possible buildings that the picture may be of, and display info about these buildings.
1.2	Use selections made by user to improve building matcher for future use.
2.1	Provide menu that provides access to the various features of the Mr. Bear guide.
2.2	Provide a building selected mode that displays multiple pictures of the building, information about the building, and a directional arrow that points in the direction of the building.
2.3	Provide building identifier feature that allows user to take a photo of a building and use it to enter the building selected mode for that building.
2.4	Provide building search engine that allows the user to search for a building on their phone by name and use the results to enter the building selected mode with one of the results.
3.1	Provide information about buildings appearing on camera while in the camera mode in the Mr. Bear app.
3.2	Provide API for managing buildings from the viewpoint of a system administrator.

Non-Functional Requirements

Ref#	Requirement
1.3	Software must be usable on an Android AND/OR iPhone.
1.4	Display ranking of matching images on smart phone and allow user to select most relevant image.
2.5	Building identifier must return results within 5 seconds of taking photo.
2.6	Mr. Bear system must be able to handle 200 concurrent users.

Use Cases

Building Matcher

Main course of action

1. User takes photograph of building on smart-phone.
2. User waits for processing of image.
3. User views list of possible buildings based on how well they match the photo.
4. User selects building that may be the building photographed.
5. User views a selection of photos of the building.
6. User confirms that this building is correct and views detailed information about the building.

Alternative course of action

4. User indicates that this is not the matching building and goes back to the building selection screen.
5. User selects a different building and continues from step 4.

Mr. Bear App

Main course of action

1. User selects camera (building identifier) from menu.
2. User views campus through smart phone camera and take a photo of a building.
3. User views list of possible building matches.
4. User selects relevant building and is taken to building selected mode where information about the building is displayed.
5. User selects 'go back to menu' and returns to start screen.

Alternative course of action

1. User selects building search mode.
2. User is given text field and list of commonly searched buildings.
3. User types in building name (narrowing search results as characters are entered)
4. User selects building, entering building continuing from step 4.

Augmented Reality

Main course of action

1. User selects camera (building identifier) from menu.
2. User views campus through smart phone camera, building identifiers augment view by placing identifiers on the view.
3. continue from Increment 4 step 2.