Animal Custom Vision - Documentation Contributions

This document presents my individual contributions to the project's documentation, including the functional requirements, documentation for the pet owner user, and a test case.

Functional Requirements

Web-Based Prototype

- A responsive web application for analysing animal behaviour from images.
- Users can upload images for analysis.

Integration with Azure Custom Vision

- Use Azure Custom Vision to train and deploy a model for classifying animal behaviours.
- API calls will be made to retrieve classification results.

Image Handling

- Support for common image formats (JPEG, PNG, GIF).

Automated Categorisation of Animal Behaviour

- The system will classify images into predefined health tags (e.g., skin condition, eye condition, excessive sleep).
- Uses a custom-trained model rather than just pre-trained models.

Use of Cloud-Based AI Services

- All AI processing is handled via Azure's cloud-based cognitive services.
- API responses will be processed and displayed in a user-friendly manner.

Results Storage

- Store analysis results for each uploaded image.

User Role

Role	Description
Pet owner	Users who use the system to upload images of their pets for AI-based behaviour analysis and receive insights into behaviours like eating, sleeping, and other activities. **Responsibilities:** ● Upload & submit images of their pet for analysis ● View generated tags of possible illnesses with confidence percentage of the analysis

User Stories

Title: Image Submission	**Priority:** High	**Estimate:** 8
As a pet owner, **I want to** submit an image for analysis, **so that** any signs of specific health issues can be detected and tagged.		
Acceptance Criteria **Given** I have an image available to submit, **When** I submit an image for analysis, **Then** the system should: ● Validate the uploaded image (e.g. correct format, size) ● Analyse the image		
Stage of Implementation: Done		

Title: View Behaviour Analysis	**Priority:** High	**Estimate:** 8
As a pet owner, **I want to** view the analysis results after submitting an image, **so that** I can understand any detected conditions or symptoms related to my pet's health.		
Acceptance Criteria **Given** an image has been analysed, **When** I check the results, **Then** the system should: ● Detect and tag visible health conditions (e.g., limping, scratching) ● Show confidence scores for each tag		
Stage of Implementation: Done		

Persona

Name	Kit Sinclair
Details	- Age: 28 - Occupation: Actor - Location: London, UK - Role: Pet owner - Disability: Mild hearing loss
Background	Kit is an actor with a busy and unpredictable schedule, often away from home. His British Shorthair cat is independent and self-sufficient, but he doesn't want to miss any signs of stress or illness. He uses the system to upload images and analyse his cat's health condition, ensuring his pet stays healthy and happy. Due to mild hearing loss, Kit prefers visual-based notifications over sound alerts. He needs the system to provide clear visual cues for analysis results with text-based output.
Goals	- Effortlessly upload and analyse images of your pet without hassle. - Receive accurate health insights without sifting through excessive information. - Use the system in a way that requires minimal engagement.
Frustrations	- Complicated or time-consuming interfaces. - Overly detailed or redundant information.
Technology	Laptop, tablet, mobile phone
Scenario	Kit uploads an image of his cat and submits it. After processing, the system displays the detected health conditions, a short description and a confidence percentage, with text-based output and clear visual cues, such as colour coding and icons.

Test Case

Test Case ID	TC002
Test Description	Verify that users can upload images in various formats (JPEG, PNG, GIF) on a mobile/tablet device.
Pre-Conditions	● The Image Upload page should be functional and accessible
Steps to Execute	● Navigate to the Image Upload page on a mobile or tablet device. ● Press the "Choose File" button using touch input. ● Select an image file in JPEG, PNG, or GIF format from the local system. ● Press the "Analyse" button.
Expected Result	● The system should successfully accept and upload the selected image. ● A confirmation message should be displayed after a successful upload. ● The uploaded image should be correctly displayed in the designated preview area. ● The interface should correctly adjust for different mobile and tablet screen sizes (portrait and landscape). ● All buttons and input fields should respond correctly to touch interactions.
Status	Pass