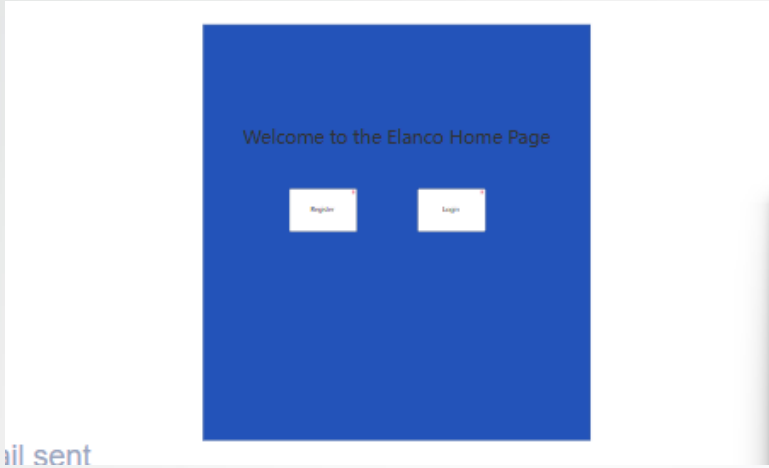
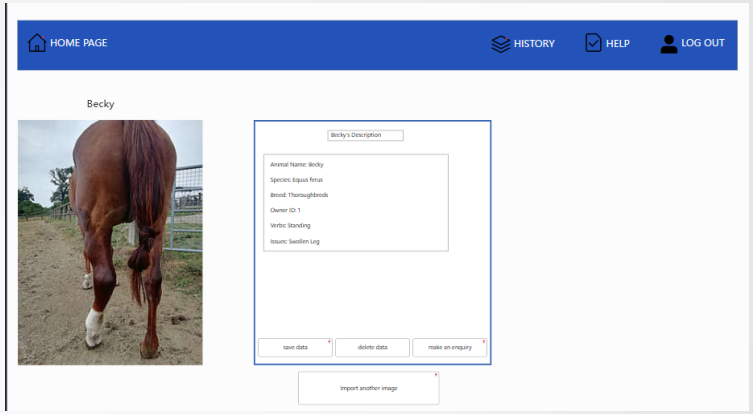
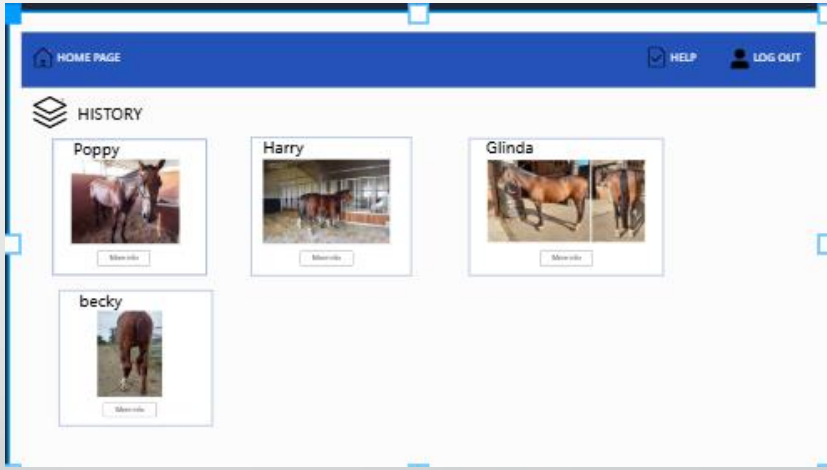
Elanco Team 2 Presentation

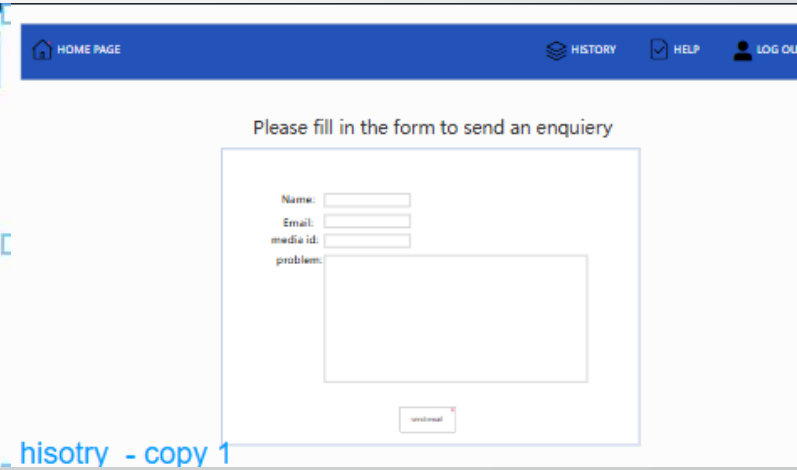
Initial Wire Frame

- Initial look of the website
- Created using MockPlus
- An idea of what we wanted the website to look like and how it would be to navigate
- Some changes were made along the way to alter the front end and made it sharper and more professional looking, along with enhancing clarity and visibility for the points of interest to the user.

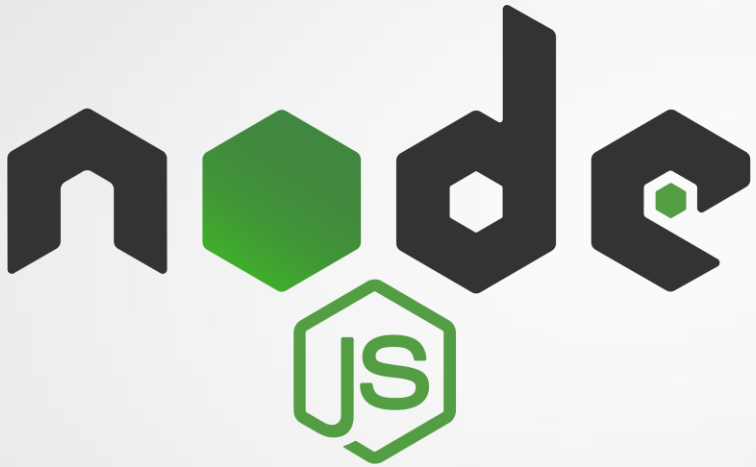








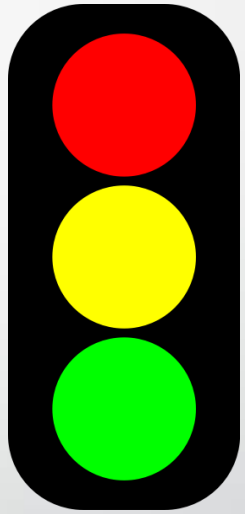
Technologies Used



- *HTML*
- *CSS*
- *JavaScript*
- *Node.JS*
- *Azure AI Custom Vision*

The Software:

- We used JavaScript to develop the backend and integrate the custom model's API
- For the front-end, we used HTML and CSS. However, determining the colours for the RAG (Red-Amber-Green) system of each tag at runtime was handled separately via a JavaScript function
- The application ran on a Node.js server, which was necessary for making API calls and posting images to our model



Software Presentation:

Reasons for Azure

-Existing functionalities are what we need – i.e. it has extract common tags from images

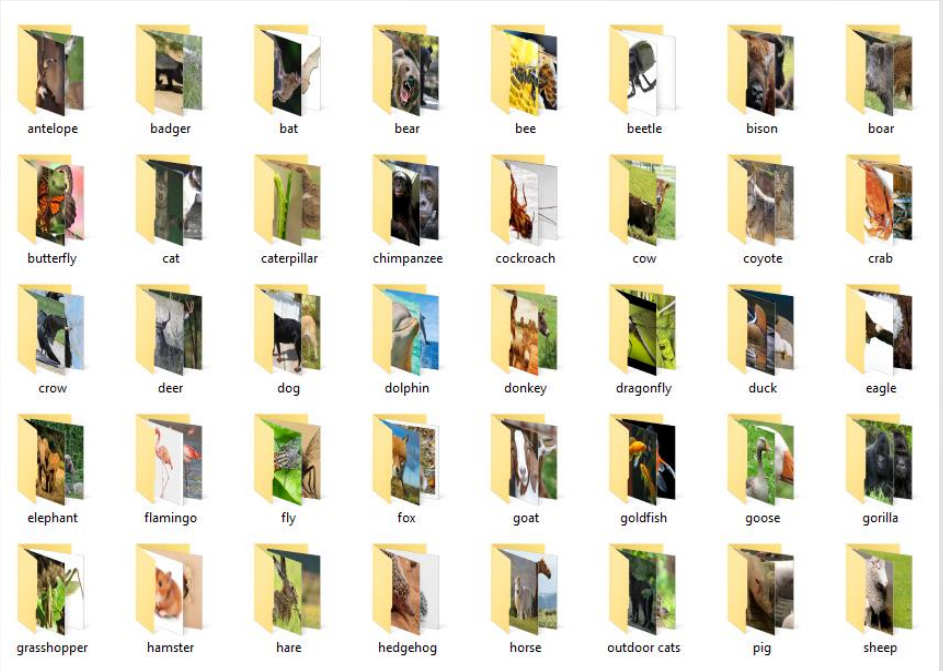
-Simple deployment

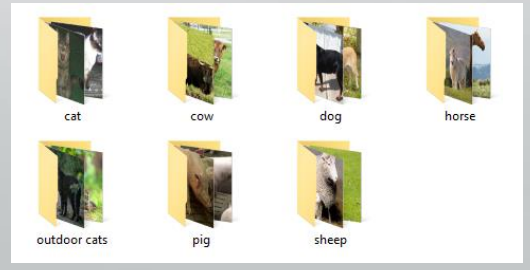
-The free model was suitable in terms of calls and submission and was what we needed without cost

-Straightforward training process

Dataset

We found a large dataset of several different animal species to train the AI more generally. This was then expanded upon by sourcing individual photos of animal behaviours to further refine the model.

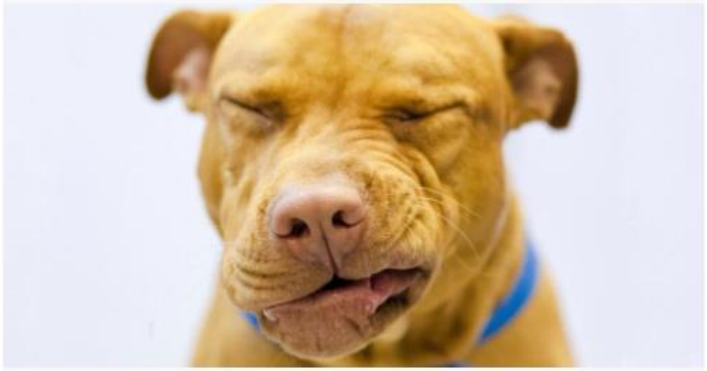




AI Performance

Our Model is more specialised than the generic Azure Tag Extractor

Image Detail



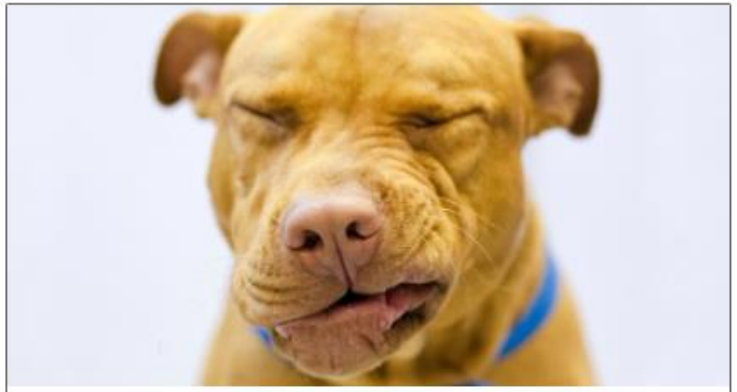
My Tags

Add a tag and press enter

Predictions

Tag	Probability
dog	87.3%
sneezing	80.7%
indoors	80.4%
outdoors	15.3%
cat	8.9%

Save and close



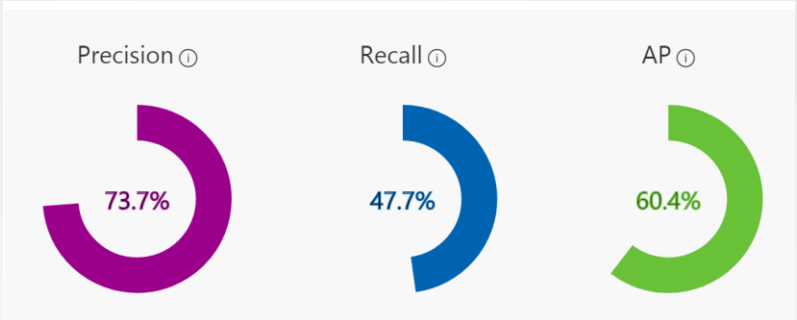
Detected attributes JSON

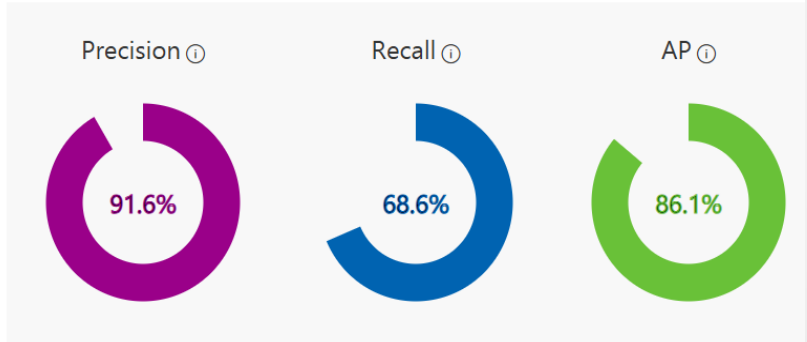
mammal (98.44%)
dog (98.20%)
dog breed (98.15%)
animal (96.47%)
snout (95.49%)
pet (94.69%)
dog collar (85.86%)
collar (85.02%)
pit bull (72.46%)
brown (71.44%)
yellow (62.36%)
outdoor (60.70%)
bulldog (49.34%)

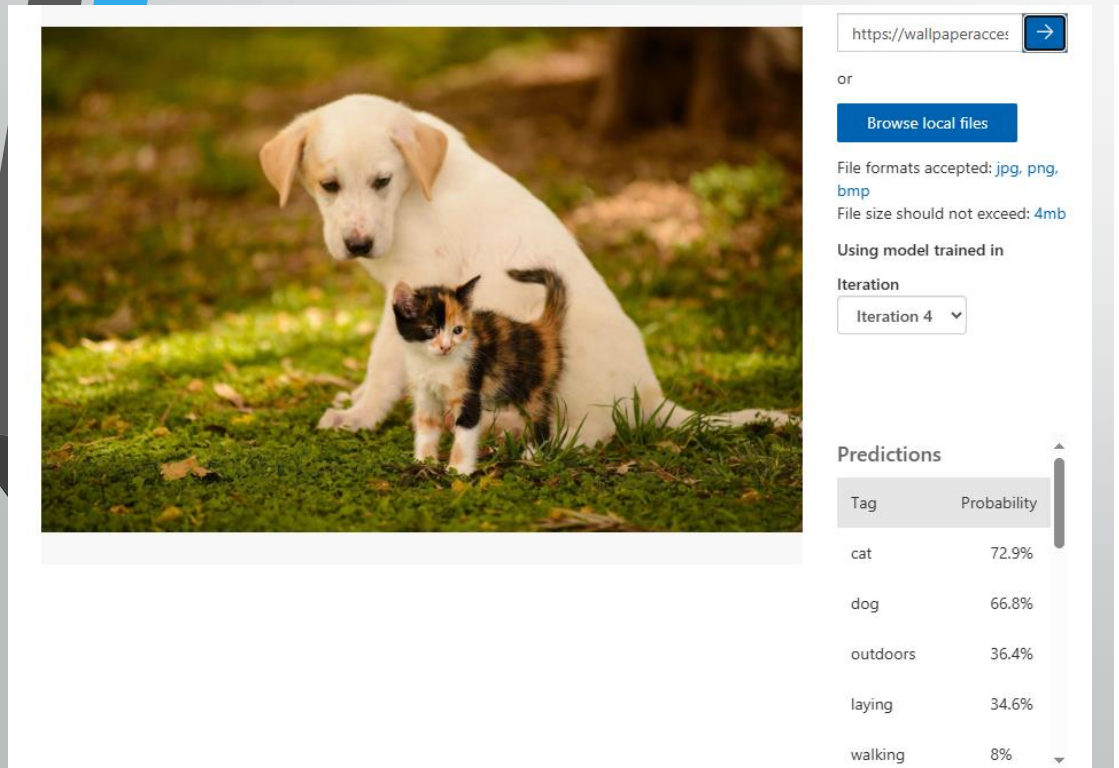
AI Performance 2

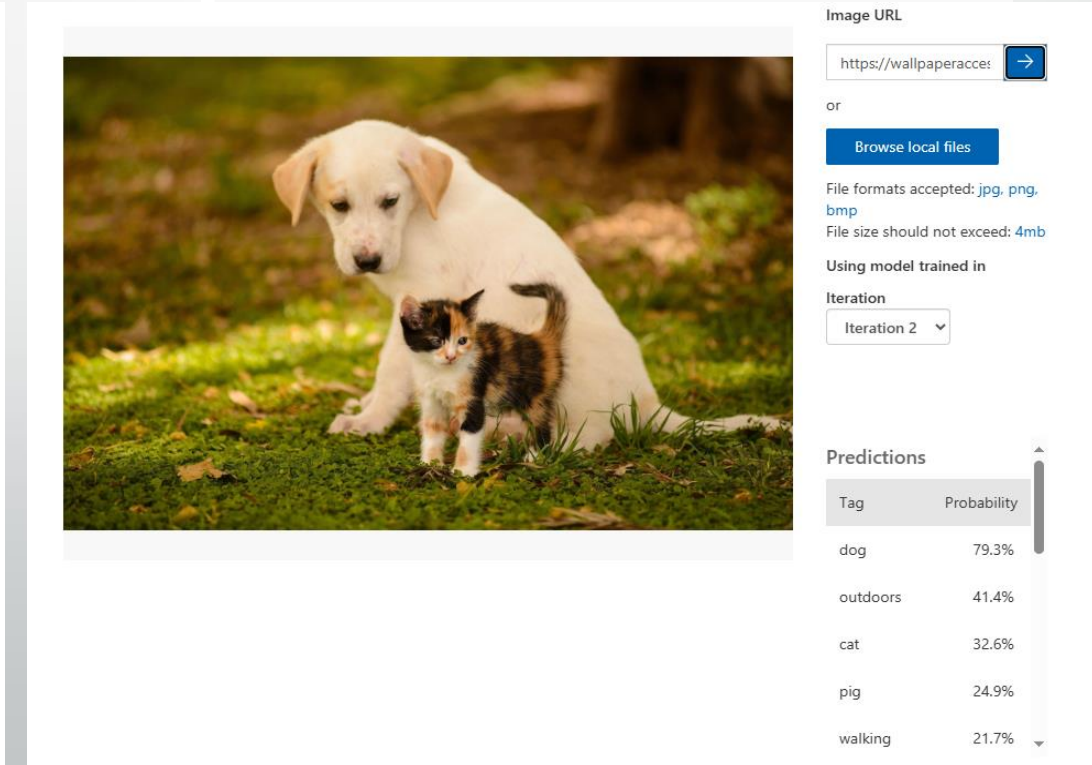
Iterative Improvement between Iteration 1 and 2 due to:

- More Images
- More uniform data set





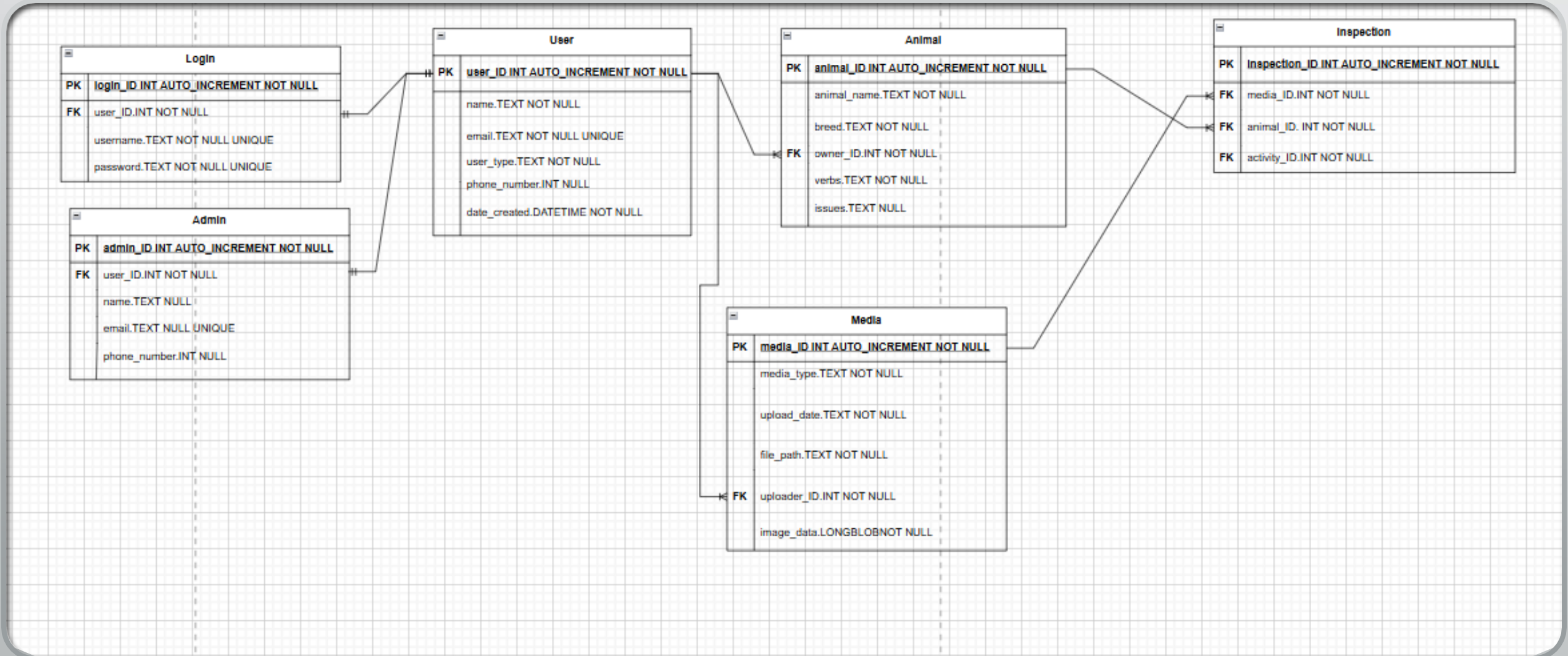




Stretch goals and ideas for the future

Database

- Aim: To allow users to have log in and to be saved to therefore allow them to see history and past images that have been analyzed.
- Tables: user, login, animal, media and admin? Inspection?
- Not complete as we prioritized the ai and front-end.



Things we are already working on:

- Include a more comprehensive key rag system to help the user understand the results of the image more clearly.
- We are also planning to include videos and gif for the ai to be able to analyse as well as photos, to give our user more options.

Any questions ?