- ImageBinaries (image_id, image_binary)
- ImageMetadata (image_id, time, date, camera_id)
    - Foreign Key image_id references ImageBinaries(image_id)
    - Foreign Key camera_id references Cameras
- Cameras (camera_id, camera_type, location)
- MachineLearningMetadata (photo_id, environment, animal_id)
    - Foreign Key image_id references ImageBinaries(image_id)
    - Foreign Key animal_id references Animals
- Animals (animal_id, animal_species, animal_age)

ImageBinaries(photo_id, image_binary)

This table holds the actual photo in binary, hence “ImageBinaries.” This table is the base table of the database, and does not contain any foreign keys.

image_id	image_binary

ImageMetadata(image_id, time, date, camera_id)
image_id Foreign Key references ImageBinaries(image_id)
camera_id Foreign Key references Cameras(camera_id)

This table holds the metadata we are given by the customers regarding each image, hence “ImageMetadata.” This table uses image_id as its primary key, which is also the primary key of the ImageBinaries table, so entries in this table can be easily linked to binary images in the ImageBinaries table. This table also has a camera_id entry, which is used as a foreign key to reference more camera information in the Cameras table.

image_id	time	date	camera_id

Cameras(camera_id, camera_type, location)

This table holds the data pertaining to the cameras that capture the images, hence “Cameras.” This table contains no foreign keys, and only relates to the ImageMetadata table, which stores a reference to camera_id.

camera_id	camera_type	location

MachineLearningMetadata(photo_id, environment, animal_id)
image_id Foreign Key references ImageBinaries(image_id)

Animal_id Foreign Key references Animals(animal_id)

This table holds the data that is generated by machine learning, hence “MachineLearningMetadata.” This table contains a foreign key animal_id which is used to reference more animal specific data in the Animals table.

image_id	environment	animal_id

Animals (animal_id, animal_species, animal_age)

This table holds information on the animals the image captured, hence “Animals.” This table contains no foreign keys, and only relates to the MachineLearningMetadata table, which stores a reference to animal_id.

animal_id	animal_species	animal_age