B.A.G.S
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GEA Worksheet

Goals

What might be the goals of the intelligent system?

The main goal of the intelligent system is to be able to identify dogs in pictures/visual media. The system will attempt to identify the pictures of dogs with the highest degree of accuracy while not identifying non-dog pictures. As a larger goal this idea could be extended to identifying other kinds of animals for a conservation group or a social media platform. More widely this topic delves into the possibility of training biases and the social implications of image identification AI.

Environment

What is the environment that the intelligent system will be adapting within?
The artificial intelligence system will be fed images that may or may not contain a dog within it. The AI must then adapt to determine what images have a dog (or multiple dogs) within them and then determine what portion of the image is actually of the dog(s).

The range of quality of the images may be large. The AI may need to be robust enough to detect dogs in images of varying quality. The images may consist of images that vary in dimensioning and other image processing factors. This means that even if an image is of an odd dimension, rotated, cropped, etc, the intelligent system should still be able to determine if a dog is contained within the image.

Adaptation

How might the intelligent system adapt to the environment given the goals? How might it's inner environment change?

The intelligent system will adapt to the environment by learning which pictures are and are not of dogs. We are considering using a neural network to identify the pictures so the system would adapt inwardly by tuning the weights of the connections of the nodes. In this way the inner environment would modify itself in order to best match the data it has been given to train on. Ultimately, the system would seek to minimize the cost function and attain the highest accuracy possible.