F.A.U.N.A. (Flora & Animal Universal Application)

Image Classification Research Poster

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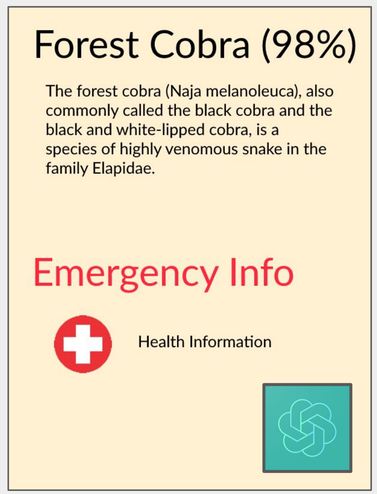
Not everyone is an expert on the dangerous flora and fauna of an area they visit, especially tourists.

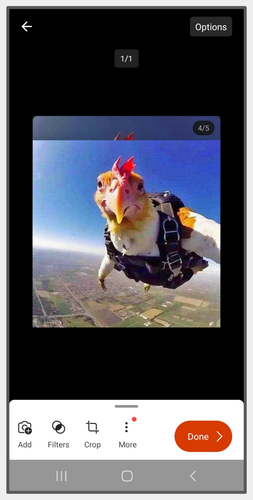
What will the app look like in action?

After an animal or plant has been identified, you will learn about its name and whether it's venomous or poisonous.

Important information can be generated using generative AI models, such as ChatGPT.



Choose an image from your Gallery!



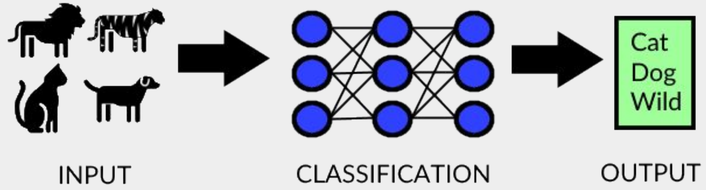
Where to Store

The model needs to be stored, and perhaps the best way to do is storing it locally as a TFLITE file, optimised for mobile devices. No internet in the jungle!

CNN → Awesome Lite

How does it work?

Using Machine Learning we can identify whether an animal or plant is venomous or poisonous. And, provide some helpful info.



Technology Research

In Image Classification, a machine learning model is trained to recognize objects from photos.

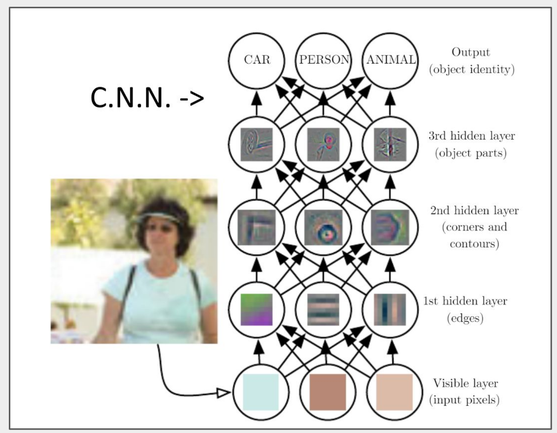
A Convolutional Neural Network (CNN) is the model most commonly used for Image Classification.

Multiclass classification categorizes items into three or more classes.

Android Studio can also be used to make multi-platform applications for iOs as well as Android phones, using Kotlin.

The Machine Learning Model

Here's how the CNN (Convolutional Neural Network) works **[1]**:



The algorithm can also **improve itself over time**, with standard use! Storing new data locally on an **SQL database** and training the model on a cloud service, such as **AWS**.

References:

[1] Ian Goodfellow, Yoshua Bengio, Aaron Courville - Deep Learning (MIT)