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Chihuahua or Muffin

ITAI 1378

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Lab 06 Chihuahua or Muffin

The "Chihuahua or Muffin" workshop is a fun way for people who are new to machine learning, especially picture classification, to learn. Your job is to figure out whether a picture shows a Chihuahua or a muffin. This can be harder than it sounds. It helps people understand how picture recognition works with machine learning.

Option A—using AWS SageMaker Studio Lab—was my initial choice. However, the deadline stressed me and I wasn't sure how long the project would take. So I chose Option B, which uses Google Colab. I then encountered code issues. I initially consulted Speak to AI – Patricia, ChatGPT, and Gemini. Although they explained the errors differently, integrating their recommendations helped me understand the situation. How you ask the AI for aid matters, too. Questions must be detailed to get useful answers.

Colab proved helpful. Under the cell in which the issue occurred, there was a button labeled "ExplainError" that appeared whenever a coding error appeared. When I clicked on it, a window that seemed to be side-by-side opened up with Gemini offering assistance. Gemini even provided suggestions on how to correct the problem, which proved to be of great assistance to me.

Each code cell could be executed without much difficulty when there were no errors. The most difficult part was correcting the faults as soon as they occurred, but artificial intelligence was a big assistance in resolving those issues. When it came to my photographs, I was likewise unsure of the appropriate height and width to employ.

This lab shows that sometimes initial models might not perform well without any adjustments. I learned that machine learning is an iterative process, where parameters, model architectures, and techniques such as data augmentation can be adjusted to improve accuracy.

I’ve realized how important image classification is in many industries. Accurately identifying objects can help humans in a variety of ways, like diagnosing medical conditions or recognizing items.

Overall, the "Chihuahua or Muffin" activity teaches beginners about the challenges of image classification. It also shows how important it is to have good data and a carefully designed machine-learning model to make accurate predictions.