**L06 Assignment – Image Classification with CNNs**

**Activities:**

* I built and trained a Convolutional Neural Network (CNN) to classify images of chihuahuas and muffins.
* I implemented transfer learning using PyTorch to enhance model performance.
* I participated in the "Chihuahua vs. Muffin" workshop.
* I classified images as either chihuahuas or muffins using CNNs and transfer learning.
* I loaded and preprocessed data.
* I trained the model using PyTorch.
* I visualized the results.

**Result**

* I achieved a training accuracy of 75% and a validation accuracy of 86%.
* Many predictions had low probabilities (50-70%).
* There were several incorrect classifications that occurred.
* The model struggled to differentiate between similar images, indicating a need for further optimization**.**

**Reflection**

* **Challenges**: I faced challenges with the similarity of images and understanding new Python code.
* **Solutions:** I gained insights into image classification, transfer learning, and CNNs. I recognized the importance of proper data preparation for CNNs. I prepared to tackle more complex CNN projects and explore real-world applications.
* **Key Takeaways**: The experience provided a foundational understanding of CNNs, setting the stage for future projects and research.