General Description: Submit a report following findings of a Convolutional Neural Network compared with a pre-trained EfficientNetV2B1.

Why am I doing this? This is your opportunity to synthesize the skills of machine learning in order to learn about neural networks and image identification.

What am I going to do? In this case study you are going to review the image classification of the Stanford Dogs dataset. Your goal is to develop a Convolutional Neural Network that can accurately identify and classify dog breeds from images.Additionally, in order to compare your results you are also tasked to train the prebuilt neural network, EfficientNetV2B1. Comparing your model's performance with EfficientNet will help gauge the effectiveness of your CNN.

How will I know I have Succeeded? You will meet expectations when you follow the criteria below.

Formatting	● Topic – Stanford Dog Data image classification ● Title Page o Title of the project o Your name, year, and course number o Date of submission ● Abstract o Provide a brief summary of the project goals, methodology, key findings, and conclusions ● Introduction o Provide background information, no need to overthink this ● Dataset Description o Overview of the dataset o Details about the image dat ▪ Number of images ▪ Number of breeds ▪ Image quality ● Methodology o Description of CNN o Explanation of EfficientNetV2B1 o Data processing o Details on the training process ● Results o Presentation of the evaluation metric used ▪ Accuracy, precision, etc o Analysis of both models performance o Visual representations of key results ▪ Charts, graphs
Presentation	● Goal: This should be a presentation that shows the steps throughout the project

	● Include motivation and hypothesis for the project ● Include research question and modeling approach ● Data explanation ● Analysis Plan ● Tricky Analysis Decision ● Bias and Uncertainty ● Results and Conclusion ● Next Steps