In the modified version of my Convolutional Neural Network (CNN), I made several improvements to increase its performance and generalization compared to the original baseline model:

1. **Added Batch Normalization:**
   * Batch normalization layers were added after convolution layers to stabilize training, speed up convergence, and reduce sensitivity to weight initialization.
   * This helped the model train more efficiently and improved overall accuracy.
2. **Introduced Dropout Layers:**
   * Dropout was added before the dense layer to prevent overfitting by randomly deactivating a portion of neurons during training.
   * This forced the model to learn more robust and generalized feature representations.
3. **Increased Dense Layer Capacity:**
   * The fully connected layer was increased from 64 to 128 units to improve the model’s ability to learn complex decision boundaries.
   * A larger dense layer allows the network to combine learned features more effectively before final classification.
4. **Added a Softmax Activation to the Output Layer:**
   * The original output layer had no activation, so I added a softmax layer to convert raw logits into probability distributions.
   * This improved the model’s stability and interpretability during training and evaluation.













