**DL Lab 07**

1. **Observe the model performance improvements between the above two models and give reasons for the observed improvements.**

**1. Model Performance Metrics:**

* You would typically compare accuracy, loss (for training and validation), and other metrics like precision, recall, or F1-score between the two models.
* The improvements might be reflected in faster convergence, lower loss, or higher accuracy.

**2. Reasons for Performance Improvements:**

The reasons for observed improvements could be due to:

* Model Architecture: If one model uses a deeper or more complex architecture (e.g., more convolutional layers, pooling layers, etc.), it can capture more complex features, leading to better performance.
* Regularization: If one model incorporates techniques like dropout or batch normalization, it might generalize better and prevent overfitting, leading to improved performance on validation data.
* Hyperparameters: Differences in learning rate, batch size, or optimizer (e.g., using Adam instead of SGD) can significantly affect model performance.
* Data Preprocessing: Enhanced data preprocessing, such as better normalization or augmentation, might also lead to performance improvements.
* Optimizer and Loss Function: The choice of optimizer and loss function can influence how fast the model converges and how effectively it learns.