**Model Development Phase**

|  |  |
| --- | --- |
| Date | 22 June 2025 |
| Team ID | SWTID1749918275 |
| Title | Bulls Eye Target Detection using Transfer Learning |
| Maximum Marks | 4 Marks |

**Model Selection Report**

In the forthcoming Model Selection Report, various models will be outlined, detailing their descriptions, hyperparameters, and performance metrics, including Accuracy or F1 Score. This comprehensive report will provide insights into the chosen models and their effectiveness

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Description | Hyperparameters | Performance Metric (Accuracy / F1 Score) |
| MobileNetV2 (Transfer Learning) | Pre-trained CNN (ImageNet) used as a fixed feature extractor. Global average pooling followed by fully connected dense layers for binary classification. Lightweight and efficient for image tasks with small datasets. | - Optimizer: Adam - Loss: categorical\_crossentropy - Epochs: 20 - Batch size: 32 - Image size: 224×224 | Accuracy = 75**%** F1 Score (bulls eye) = **0.83** F1 Score (not bulls eye) = **0.45** |