**Model Development Phase Template**

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| Date | 20 November 2025 |
| Team ID | 740018 |
| Project Title | Deepfruitveg:Automated Fruit And Vegetables Identification |
| Maximum Marks | 5 Marks |

**Model Selection Report**

The **Deepfruitveg** model selection report evaluates various machine learning models for fruit and vegetable identification, comparing accuracy, performance, and suitability based on dataset size, complexity, and real-time requirements.

**Model Selection Report:**

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| **Model** | **Description** |
| Convolutional Neural Network (CNN) | A deep learning model designed to automatically classify and identify fruits and vegetables from images based on their features. |
| ResNet (Residual Network) | A CNN variant that addresses vanishing gradient problems, enabling deeper networks for more accurate fruit/vegetable identification. |
| InceptionV3 | A deep learning architecture known for its efficiency and accuracy in image recognition, suitable for multi-class fruit/vegetable identification. |
| MobileNet | A lightweight neural network optimized for mobile and embedded devices, offering fast and accurate fruit/vegetable identification. |
| Transfer Learning (VGG16, AlexNet) | Utilizes pre-trained models on large datasets and fine-tunes them for the specific task of fruit/vegetable classification, improving efficiency and accuracy. |
| YOLO (You Only Look Once) | A real-time object detection model that can simultaneously classify and locate fruits/vegetables in images, suitable for quick identification tasks. |