AI-Powered Nutrition Analyzer For Fitness Enthusiasts

Date	21-06-2025
Team ID	SWTID1749893823
Project Title	AI-Powered Nutrition Analyzer For Fitness Enthusiasts
Maximum Marks	5 Marks

Model Selection Report

In the model selection report for future deep learning and computer vision projects, various architectures, such as CNNs or RNNs, will be evaluated. Factors such as performance, complexity, and computational requirements will be considered to determine the most suitable model for the task at hand.

Model	Description	Performance Metric (Accuracy)
VGG16	It is a deep convolutional neural network with 16 layers developed by the Visual Geometry Group at Oxford. It uses small 3×3 filters and follows a simple, uniform architecture with stacked convolutional and max-pooling layers. It is accurate but computationally heavy and memory-intensive.	Accuracy Score: 98.01%
MobileNetV2	It is a lightweight, efficient CNN designed for mobile and embedded vision applications. It uses depthwise separable convolutions and **inverted residual blocks** to reduce computation and model size. MobileNetV2 is faster and smaller than VGG16, with comparable accuracy for many tasks.	Accuracy Score: 99.91%