Functional & Performance Testing Template

Model Performance Test

Date	21 February 2025
Team ID	LTVIP2025TMID42449
Project Name	Butterfly Species Classification System
Maximum Marks	4 Marks

1 Test Scenarios & Results

Test Case ID	Scenario (What to test)	Test Steps (How to test)	Expected Result	Actual Result	Pass/Fail
FT-01	Image Input Validation	Upload valid (JPEG/PNG) and invalid (e.g., text) files in Streamlit	Valid images accepted, errors for invalid files	[To be filled]	[To be filled]
FT-02	Species Classification	Upload butterfly image and run MobileNetV2 prediction	Correct species predicted with confidence score	[To be filled]	[To be filled]
FT-03	Educational Facts Display	Select predicted species in Streamlit	Relevant facts (e.g., habitat) retrieved from SQLite	[To be filled]	[To be filled]
FT-04	Preprocessing Validation	Upload image and verify preprocessing (resize, normalize)	Image resized to 224x224, normalized to [0,1]	[To be filled]	[To be filled]
FT-05	API Connection Check	Send classification request via Flask to MobileNetV2	API responds successfully	[To be filled]	[To be filled]
PT-01	Response Time Test	Measure time for image classification in Streamlit	Response under 2 seconds	[To be filled]	[To be filled]
PT-02	API Speed Test	Send multiple concurrent API calls via Flask	API maintains performance without slowdown	[To be filled]	[To be filled]
PT-03	Image Upload Load Test	Upload multiple images simultaneously	System processes smoothly without crashing	[To be filled]	[To be filled]
PT-04	Model Accuracy Test	Evaluate model on test set (975 images)	Achieve 95% accuracy	[To be filled]	[To be filled]