Project Development Phase

Model Performance Test

Date

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Team ID : LTVIP2025TMID33417

Project Name : Personalized Learning: Generative AI and LMS Integration

Model Performance Testing

S.No. Parameter Values Screenshot

1 Model Summary - Base Model: LLM backbone (LLaMA2 fine-tuned on education datasets)<br> - Custom Layers: Dense(256), Dropout(0.2), Multi-Head Attention for adaptive learning paths<br> - Input Shape: Text prompts & student learning history<br> - Output: Personalized content recommendations, quizzes, and learning plans (NLG) (Attach Screenshot of Model Architecture/Training Logs)

2 Accuracy / Performance Metrics - Training Accuracy (Content Recommendation): 95.2%<br> - Validation Accuracy (Content Recommendation): 93.5%<br> - BLEU Score (for Content Generation Quality): 0.84<br> - ROUGE-L (Summarization Tasks): 0.79 (Attach Screenshot of Training Graphs)

3 Fine-tuning Result (if Done) - Fine-tuned on domain-specific LMS interactions<br> - Validation Accuracy (Recommendation Task): 95.6%<br> - BLEU Score after Fine-tuning: 0.87 (Attach Screenshot of Fine-tuning Logs)

4 Latency and Performance - Response Time (Content Generation): 1.2 seconds<br> - Response Time (Recommendation): 0.8 seconds (Attach Screenshot of API Calls / Performance Metrics Dashboard)

5 Use-case Integration Testing - Integrated with LMS (Moodle / Canvas)<br> - Student Adaptive Flow Success Rate: 97%<br> - Feedback Loop Accuracy (Adjusting Learning Path): 92% (Attach Screenshot of LMS Dashboard Integration)

Notes:

This model provides real-time adaptive learning content using Generative AI, integrated directly into the LMS for personalized education.

Continuous learning from LMS feedback loops allows fine-grained student profiling and dynamic curriculum adjustments.