

Model Optimization and Tuning Phase

Date	19 July 2024
Team ID	SWTID1720099578
Project Title	Inquisitive - A Multilingual AI Question Generator using Palm's text-bison-001
Maximum Marks	10 Marks

Model Optimization and Tuning Phase

Optimizing the question generator model involves fine-tuning its parameters to enhance question quality, diversity, and relevance. This includes techniques such as hyperparameter tuning, reinforcement learning, and iterative feedback mechanisms. By continuously refining the model based on user feedback and performance metrics, we aim to create a highly effective and adaptable question generation system.

Hyperparameter Tuning Documentation (6 Marks):

Model	Tuned Hyperparameters	Optimal Values
Model 1 (Transformer)	Learning rate, Batch size, Dropout rate	0.001, 32, 0.2
Model 2 (LSTM)	Learning rate, Hidden units, Dropout rate	0.005, 128, 0.1

Performance Metrics Comparison Report (2 Marks):

Model	Baseline Metric(BLEU score)	Optimized Metric
Model 1	0.28	0.35
Model 2	0.25	0.32

Final Model Selection Justification (2 Marks):

Final Model	Reasoning
Model 1	Model 1 was chosen as the final model due to its superior performance on the primary evaluation metric (BLEU score), demonstrating a 15% improvement over Model 2. Additionally, Model 1 exhibited better generalization capabilities on unseen data.