

Model Optimization and Tuning Phase

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Team ID	LTVIP2026TMIDS66271
Project Title	Flavour Fusion: AI-Driven Recipe Blogging
Maximum Marks	10 Marks

Model Optimization and Tuning Phase

The Model Optimization and Tuning Phase focuses on improving the performance and quality of the generated recipe blogs by configuring and fine-tuning model generation parameters rather than training a neural network from scratch. Since the project uses a pre-trained generative AI model, optimization is achieved through prompt design and parameter tuning.

Hyperparameter Tuning Documentation:

Model	Tuned Hyperparameters
Gemini Flash Lite	<p>Temperature: Controls creativity of output (set to a moderate value for balanced creativity).</p> <p>Top-p: Limits token selection to the most probable tokens for coherent responses.</p> <p>Top-k: Restricts token sampling to reduce irrelevant content.</p> <p>Max Output Tokens: Ensures generated recipe blogs match the desired word count.</p> <p>Response Format: Set to plain text for easy display in the UI.</p>

Final Model Selection Justification:

Final Model	Reasoning
Gemini Flash Lite (models/gemini-flash-latest)	Selected due to its fast response time, efficient resource usage, high-quality text generation, and seamless integration with Streamlit for real-time recipe blog generation.