

## Model Optimization and Tuning Phase

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Team ID	LTVIP2026TMIDS66319
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><b>Temperature:</b> Controls creativity of output (set to a moderate value for balanced creativity).</p> <p><b>Top-p:</b> Limits token selection to the most probable tokens for coherent responses.</p> <p><b>Top-k:</b> Restricts token sampling to reduce irrelevant content.</p> <p><b>Max Output Tokens:</b> Ensures generated recipe blogs match the desired word count.</p> <p><b>Response Format:</b> Set to plain text for easy display in the UI.</p>

**Final Model Selection Justification:**

Final Model	Reasoning
Gemini Flash Lite (models/gemini- flash-lite-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.