

Basic Prompt Template – level 1

system_role:

You are an AI assistant that helps people find information.

Question :

Why did Formula 1 introduce limitations on the number of upgrades teams could make to their power units during the season?

Context:

*** context will be fetched automatically from the provided data*

- System role gives a persona to the bot. This helps the LLM identify the role
- User Query for which the LLM should generate a response.
- Context acts as the reference from which the LLM should generate response.
- The context can be a user input or may be from a retrieval system (in case of RAG systems)
- If the answer is not present in the context the LLM should return a response containing “The answer is not present in the context”. This can be included as part of instruction.

Response:

Formula 1 introduced limitations on the number of upgrades teams could make to their power units during the season to control costs and promote competition. Before these limitations, This helps prevent excessive engine penalties due to frequent power unit changes, which can negatively impact a team's performance.

Overall, the introduction of limitations on power unit upgrades is intended to strike a balance between cost control, competition, and reliability in Formula 1.

Prompt template – level 2

system_role:

You are an AI assistant designed to support the customer service team of a Formula 1 racing team. Your primary role is to assist users with inquiries related to rules and regulations.

Key Guidelines:

Provide answers in bullet points.
Answer within the given context only.

Question :

Why did Formula 1 introduce limitations on the number of upgrades teams could make to their power units during the season?

Context:

*** context will be fetched automatically from the provided data*

- Instructions guide the the LLM to perform a specific downstream task.
- We can add guidelines or rules to follow while generating an response.
- User Query for which the LLM should generate a response.
- Context acts as the reference from which the LLM should generate response.
- The context can be a user input or may be from a retrieval system (in case of RAG systems)
- If the answer is not present in the context the LLM should return a response containing “The answer is not present in the context”. This can be included as part of instruction.

Response:

- *Formula 1 introduced limitations on power unit upgrades to control costs and promote fair competition.*
- *The high cost of power unit development and frequent upgrades were becoming financially burdensome for teams.*
- *.....*
- *The restrictions also promote stability and reliability, as teams cannot make constant changes that may lead to mechanical failures or performance inconsistencies.*

Prompt template – level 3

system_role:

You are an AI assistant designed to support the customer service team of a Formula 1 racing team. Your primary role is to assist users with inquiries related to rules and regulations. Follow given guidelines strictly.

Key Guidelines:

- Provide answers in bullet points. Ensure answers are precise, technically accurate, and actionable. Use clear formatting for instructions and technical data.
- Rely solely on authorized technical documents and official sources provided. Exclude any assumption and external references.\n- List only two points.
- Use headers to highlight the important topic.

Question :

Why did Formula 1 introduce limitations on the number of upgrades teams could make to their power units during the season?

Context:

*** context will be fetched automatically from the provided data*

- Instructions guide the the LLM to perform a specific downstream task.
- We can add guidelines or rules to follow while generating an response.
- User Query for which the LLM should generate a response.
- Context acts as the reference from which the LLM should generate response.
- The context can be a user input or may be from a retrieval system (in case of RAG systems)

Response:

Reasons for Limitations on Power Unit Upgrades in Formula 1:

1. Cost Control:

- *Introduction of limitations on power unit upgrades helps to*
- *By restricting the number of upgrades, teams are encouraged to focus on ...*

2. Competitive Balance:

- *Limiting the number of power unit upgrades ensures a more level playing field*
- *Without restrictions, wealthier teams could potentially gain a significant advantage*



Parameter Tuning – Temperature

Lower temperature gives a consistent response. Higher temperature gives creative response.

Attempt	Response (temperature = 0)	Response (temperature = 1)
1	<p>Importance of Limiting Power Unit Upgrades in Formula 1</p> <p>1. Cost Control:</p> <ul style="list-style-type: none">• Formula 1 introduced limitations on power unit upgrades to control costs for teams.• Frequent upgrades can be expensive, and limiting them helps teams manage their budgets more effectively. <p>2. Competitive Balance:</p> <ul style="list-style-type: none">• Limiting power unit upgrades ensures a more level playing field among teams.• Without restrictions, wealthier teams could continuously develop and introduce upgrades, creating a significant performance gap between them and smaller-budget teams.	<p>The main reasons Formula 1 introduced limitations on the number of upgrades teams could make to their power units during the season are:</p> <p>1. Cost Control:</p> <ul style="list-style-type: none">• Limiting the number of upgrades helps control the costs associated with developing and manufacturing power unit components.• Frequent upgrades require substantial investment from teams, resulting in higher expenses and financial strain. <p>2. Competitive Balance:</p> <ul style="list-style-type: none">• Restricting the number of upgrades ensures a more level playing field by preventing teams with more financial resources from gaining an unfair advantage.• Limitations promote closer competition and enhance the overall spectacle of Formula 1 races.
2	<p>Reasons for Limitations on Power Unit Upgrades in Formula 1:</p> <p>1. Cost Control:</p> <ul style="list-style-type: none">• Formula 1 introduced limitations on power unit upgrades to control costs for teams.• Frequent upgrades can be expensive, and restricting the number of upgrades helps teams manage their budgets more effectively. <p>2. Competitive Balance:</p> <ul style="list-style-type: none">• Limiting power unit upgrades ensures a more level playing field among teams.• If teams were allowed unlimited upgrades, wealthier teams could potentially gain a significant advantage by constantly developing and introducing new power unit components.	<p>Reasons for Introducing Limitations on Power Unit Upgrades in Formula 1:</p> <p>1. Cost control:</p> <ul style="list-style-type: none">• Limiting the number of power unit upgrades helps teams control their expenses throughout the season.• With fewer upgrades, teams can better manage the costs associated with researching, developing, and manufacturing new components. <p>2. Competitive balance:</p> <ul style="list-style-type: none">• By imposing restrictions on power unit upgrades, Formula 1 aims to promote competitive balance among teams.• Limiting upgrades prevents larger teams with bigger budgets from continuously outspending smaller teams, thus narrowing the performance gap between them.

**Top P works similar to temperature, It is recommended not to change both at the same time



Parameter Tuning – Max response

The max response value should be decided based on the length of response expected.

Max response	Response
50	<p>Reasons for Limitations on Power Unit Upgrades in Formula 1</p> <p>1. Cost Control:</p> <ul style="list-style-type: none">• Formula 1 introduced limitations on power unit upgrades to control costs for teams.• Frequent upgrades can be expensive, and restricting the number of upgrades
500	<p>Reasons for Limitations on Power Unit Upgrades in Formula 1:</p> <p>1. Cost Control:</p> <ul style="list-style-type: none">• Formula 1 introduced limitations on power unit upgrades to control costs for teams.• Frequent upgrades can be expensive, and restricting the number of upgrades helps teams manage their budgets more effectively. <p>2. Competitive Balance:</p> <ul style="list-style-type: none">• Limiting power unit upgrades ensures a more level playing field among teams.• If teams were allowed unlimited upgrades, wealthier teams could potentially gain a significant advantage by constantly developing and introducing new power unit components.



Appendix – can be used if required

Prompt engineering techniques

Few shot Prompting	<p>Few-shot prompting can be used as a technique to enable in-context learning where we provide examples in the prompt to steer the model to better performance. These serve as conditioning for subsequent examples where we would like the model to generate a response. Following is an example that can be attached to a prompt:</p> <p>Prompt: <i>{Prompt}</i></p> <p><i>Few shot example:</i> <i>This is awesome! // Negative</i> <i>This is bad! // Positive</i> <i>Wow that movie was rad! // Positive</i> <i>What a horrible show! //</i></p>
Chain of thought (CoT)	<p>Large language models (LLMs) are great at generating text, but they can struggle with complex problems that require step-by-step reasoning, like solving word problems. CoT prompting tackles this by encouraging LLMs to explain their thinking. Instead of just giving a final answer, the LLM shows its “work” by breaking the problem down into smaller steps. This is like showing your calculations in math class.</p> <p>Prompt: <i>How to create a RAG application? Let's think it step by step</i></p>

Prompt engineering techniques

Prompt chaining	<p>Prompt chaining is useful to accomplish complex tasks which an LLM might struggle to address if prompted with a very detailed prompt. This involves breaking a task into its subtasks. Once those subtasks have been identified, the LLM is prompted with a subtask and then its response is used as input to another prompt.</p> <p>Task: Set up a RAG application.</p> <p>Prompt 1: What are the components involved in a RAG application</p> <p>Response 1:</p> <p>Prompt 2: Choose the best tools and techniques for each component present in {{Response 1}}</p>
Hybrid	<p>It can be some combinations of Few shot, Chain of thought and prompt chaining.</p> <p>Prompt:</p> <p>Q: Find out if the odd numbers in the given list of numbers add up to an even number: 4, 8, 9, 15, 12, 2, 1.</p> <p>A: Adding all the odd numbers (9, 15, 1) gives 25. The answer is False.</p> <p>Q: The odd numbers in this group add up to an even number: 15, 32, 5, 13, 82, 7,</p> <p>A:</p>