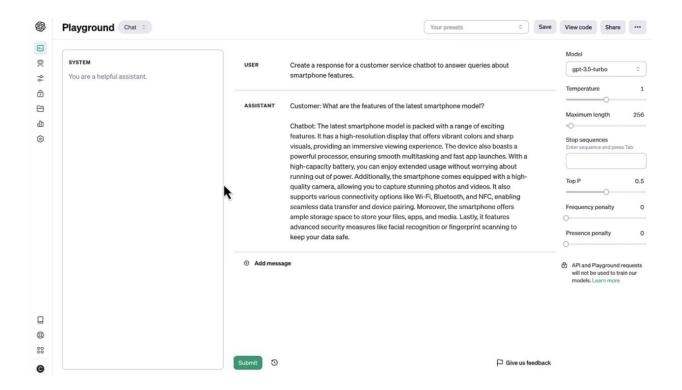
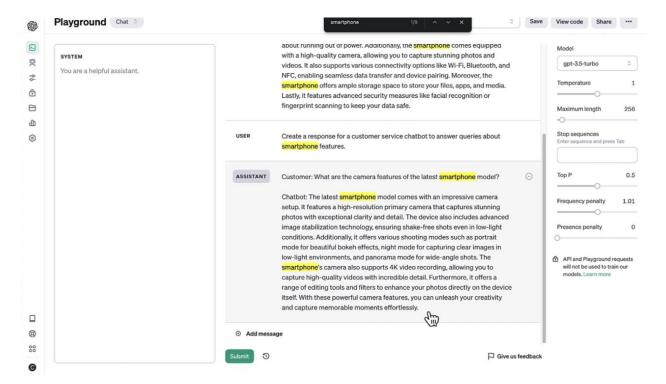
Penalty Hyperparameters

3 min

Key Concepts

- Penalty Hyperparameters: In AI language models, these hyperparameters help control the
 output by penalizing the repetition of certain words or phrases to ensure content diversity and
 relevance.
- **Frequency Penalty**: Proportional to how often a token appears in the output, discouraging the repetition of words.
 - Low Frequency Penalty (0): No penalty for repeating tokens, potentially leading to monotonous content.
 - High Frequency Penalty (1 or 2): Strongly penalizes repetition, encouraging varied language use.
- **Presence Penalty**: Focuses on whether a token has appeared at all, making it less likely for that word to be used again.
- Low Presence Penalty (0): Allows for focused content with possible repetition of the same concepts.
 - High Presence Penalty (>1): Encourages the introduction of new topics or ideas, generating more diverse content.





Presence Penalty

