

**Concept distillation prompt:**

Persona-based prompts:

You are an expert in summarization. You are given a Stack Overflow post with the <Label> of the <Post>. Now return the characteristic of the post in very short (1/2 sentences) by observing the label of the post. The return output may look like: 'ValueError: class\_weight in Keras fails for multi-label binary classification.'

Instruction-based prompt:

Follow these instructions to summarize Stack Overflow posts:\n\nYour Task:\n1. Read the provided Stack Overflow post and its <Label>\n2. Return the characteristic of the post in very short (1-2 sentences) by observing the label of the post\n\nOutput Format:\n- Write only 1-2 sentences\n- Be concise and specific\n\nExample Output:\n'ValueError: class\_weight in Keras fails for multi-label binary classification'\n\nRemember:\n- Keep it extremely brief (1-2 sentences maximum)

User style prompt:

Given a Stack Overflow post with its <Label>, summarize the characteristics of the post in 1-2 sentences based on the label. Your output should be concise, like: 'ValueError: class\_weight in Keras fails for multi-label binary classification'

**Consolidation prompt:**

Persona-based prompts:

You are an expert in summarization. You are given some characteristics of a particular class. You have to observe the characteristics and return a summary of them by removing redundancy and preserving the uniqueness. It should not be very large nor small. Just return the summary. Do not start with 'the summary is' or 'summary:' type words.

Instruction-based prompt:

Follow these instructions to summarize class characteristics:\n\nYour Task:\n1. Read the provided characteristics of a particular class\n2. Observe all the characteristics carefully\n3. Remove any redundancy while preserving unique information\n4. Return a summary that is moderate in length (not too large, not too small)\n\nOutput Format:\n- Write the summary directly without prefacing it\n- Do NOT start with phrases like "The summary is" or "Summary:"\n- Just provide the summary itself\n\nRemember:\n- Remove redundant information\n- Preserve all unique characteristics\n- Keep the length moderate and balanced.

User style prompt:

Given some characteristics of a particular class, observe them and return a summary by removing redundancy while preserving uniqueness. Keep the length moderate. Return the summary directly without phrases like 'the summary is' or 'summary:'.

### **Characteristics consolidation:**

Persona-based prompt:

You are an expert in summarization. You are given some characteristics of a particular class. You have to observe the characteristics and return a summary of them by removing redundancy and preserving the uniqueness. It should not be very large nor small. Just return the summary. Do not start with 'the summary is' or 'summary:' type words.

Instruction-based prompt:

Follow these instructions to summarize class characteristics: Read the provided characteristics of a particular class. Observe all characteristics carefully. Remove any redundancy while preserving unique information. Return a summary that is moderate in length (not too large, not too small). Write the summary directly without prefacing it. Do NOT start with phrases like "The summary is" or "Summary:". Just provide the summary itself.

User style prompt:

Given some characteristics of a particular class, observe them and return a summary by removing redundancy while preserving uniqueness. Keep the length moderate. Return the summary directly without phrases like 'the summary is' or 'summary:'

### **Classification prompt:**

Persona-based prompt:

You are a one-shot classifier that categorizes Stack Overflow posts. You have to return one value from this list only: {cls\_list}. Based on the bug type of the test sample, return only ONE VALUE FROM THE LIST. The characteristics of each class are provided below:

Instruction prompt:

You are a one-shot classifier for Stack Overflow posts. Your task: categorize the test sample into exactly one class from this list: {cls\_list}. Analyze the bug type in the test sample and return only one value from the provided list. Use the class characteristics provided below to make your classification decision.

User style prompt:

You have a Stack Overflow post, categorize it by returning exactly one value from this list: {cls\_list}. Based on the bug type of the test sample, return only one value from the list. The characteristics of each class are provided below:

### **Summarization and reasoning prompt:**

Persona-based prompt:

You are an expert in summarization and reasoning. You are given a Stack Overflow post containing an <Answer> and its associated <Label> along with the <Label Description> presenting what it means. Your task is to: Concisely summarize the post, preserving all critical information. Explain why the post has been assigned the given label, providing a clear chain of thought and reasoning. Ensure the response is structured as a short paragraph that integrates the summary, the solution, and the reasoning seamlessly. Avoid phrases like 'The summary is' and focus on providing a cohesive and informative output.

Instruction prompt:

You are an expert in summarization and reasoning. You are given a Stack Overflow post containing an <Answer> and its associated <Label> along with the <Label Description>. Your task: Concisely summarize the post preserving all critical information. Explain why the post has been assigned the given label with clear reasoning. Structure your response as a short paragraph that seamlessly integrates the summary, solution, and reasoning. Provide a cohesive and informative output without using phrases like 'The summary is'.

User style prompt:

You have a Stack Overflow post containing an <Answer> and its associated <Label> along with the <Label Description>. Concisely summarize the post preserving all critical information. Explain why the post has been assigned the given label with clear reasoning. Structure your response as a short paragraph that seamlessly integrates the summary, solution, and reasoning without using phrases like 'The summary is.'