

# **SkillCraft Technology – Prompt Engineering Internship**

## **Task 03: Prompting for Task Automation**

### **Task Objective**

The goal of this task is to apply prompting to semi-automate a useful real-world task using AI.

This includes summarizing information, extracting data, or transforming text formats.

The designed prompt should handle different inputs and give reliable, consistent outputs.

### **Selected Task**

**Topic:** Multi-Field Intelligent Summarizer with JSON Output

This task automates the process of converting unstructured text from different domains — such as Education, Business, and Healthcare — into a structured JSON format.

The designed prompt extracts key points, generates concise summaries, and suggests action items, all while maintaining a consistent JSON structure.

This automation helps organize information efficiently for analysis, storage, and decision-making across multiple real-world applications.

### **Prompt Design**

You are an intelligent AI summarizer that analyzes information from different domains such as Education, Business, and Healthcare.

Your task is to read the given text, understand the main ideas, and summarize the content in a structured JSON format.

The JSON output should follow the exact structure shown below and should always include relevant information for each key.

```
{  
  "field": "",  
  "topic": "",  
  "key_points": [],  
  "summary": ""}
```

```
"action_items": []  
}  
  
}
```

## **Example 1: Education Field**

### **Input:**

Today's lecture was about renewable energy sources. Solar energy uses sunlight to generate electricity using photovoltaic cells. Wind energy is harnessed through turbines. Hydropower uses the flow of water to create electricity. These are all clean energy alternatives to fossil fuels.

### **Output:**

```
{
```

```
    "field": "Education",
```

```
    "topic": "Renewable Energy Sources",
```

```
    "key_points": [
```

```
        "Solar energy uses sunlight and photovoltaic cells to generate electricity.",
```

```
        "Wind energy is harnessed using turbines.",
```

```
        "Hydropower uses the movement of water to produce electricity."
```

```
    ],
```

```
    "summary": "The lecture discussed three major renewable energy sources — solar, wind, and hydropower — explaining how each generates electricity and highlighting their role as clean alternatives to fossil fuels.",
```

```
    "action_items": [
```

```
        "Review how each renewable energy source converts natural resources into electricity.",
```

```
        "Compare advantages of renewable energy over fossil fuels for the next class discussion."
```

```
    ]
```

```
}
```

## **Example 2: Business Field**

### **Input:**

I really like the new design of your app, it's much smoother now. However, the payment feature crashes sometimes, and it's quite frustrating. Please fix it soon because I rely on it daily.

### **Output:**

```
{  
  "field": "Business",  
  "topic": "Customer Feedback - App Update",  
  "key_points": [  
    "Customer appreciates the new app design.",  
    "Reports crashes in the payment feature.",  
    "Depends on the app for daily use."  
  ],  
  "summary": "Customer feedback is mixed, showing satisfaction with design but frustration due to payment crashes.",  
  "action_items": [  
    "Fix the payment feature issue.",  
    "Conduct additional testing before the next release."  
  ]  
}
```

## **Example 3: Healthcare Field**

### **Input:**

Patients reported shortness of breath and chest tightness for the past three days. ECG showed mild irregularities. Blood pressure slightly elevated. The doctor advised rest,

increased fluid intake, and prescribed medication for five days. Review visit scheduled next Monday.

## **Output:**

```
{  
  "field": "Healthcare",  
  "topic": "Patient Record Summary",  
  "key_points": [  
    "Patient experienced shortness of breath and chest tightness for three days.",  
    "ECG showed mild irregularities and elevated blood pressure.",  
    "The doctor prescribed medication for five days and advised rest."  
,  
  ],  
  "summary": "Patient shows mild cardiovascular irregularities. Condition is stable and under observation.",  
  "action_items": [  
    "Continue prescribed medication for five days.",  
    "Follow up on Monday for a review appointment."  
,  
  ]  
}
```

## **Reflection**

Initially, the prompt missed some fields and did not always follow the correct JSON format. I refined the instructions to clearly mention the required keys and ensure proper structure. After iteration, the output became consistent, accurate, and well-formatted across all examples.

This showed that clear and specific prompt design leads to better automation results.