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## Guide to Implementing Prompt Engineering in Salesforce

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**Abstract:** The document outlines a comprehensive guide on implementing prompt engineering in Salesforce, detailing steps for integrating AI services, creating custom Apex classes, testing and refining prompts, deploying and monitoring performance, and optimizing for continuous improvement. It emphasizes best practices such as understanding business context, clarity in prompts, iterative testing, and ethical considerations, while providing specific instructions for creating various types of prompt templates, including text completion, summarization, and classification.

**Keywords:** AI, Artificial Intelligence, Generative AI, Prompt Engineering, Prompt, APEX, Salesforce, Einstein, ChatGPT, Prompt Templates.

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### 1. Introduction

Generative artificial intelligence (AI) has brought tremendous value to the everyday workflows of consumers, from upending how students' study for exams to helping travelers quickly plan itineraries. While we've encountered firsthand how generative AI supercharges our daily tasks, we haven't seen the same level of impact on our business workflows — until now.

As artificial intelligence (AI) continues to revolutionize the way businesses operate, the ability to interact effectively with AI systems has become a critical factor for success. One of the most significant advancements in this space is prompt engineering—the process of crafting inputs to guide AI models toward generating relevant, accurate, and valuable outputs. In the Salesforce ecosystem, where AI-driven solutions like Einstein GPT are empowering organizations to automate workflows, enhance customer interactions, and gain actionable insights, prompt engineering has emerged as a vital skill for optimizing AI performance.

This white paper explores the concept of prompt engineering within Salesforce, its practical applications – step by step guide, and the strategies, best practices that organizations can adopt to maximize the impact of their AI initiatives. By leveraging effective prompt engineering, businesses can ensure that their AI models deliver tailored responses aligned with their specific use cases, from automating customer service responses to generating personalized sales recommendations. We will also examine common challenges in prompt engineering and provide best practices for overcoming these obstacles, ensuring that AI technologies are fully integrated into the business fabric.

Whether you are looking to streamline operations, improve customer engagement, or drive data-driven decision-making, mastering prompt engineering in Salesforce can unlock the true potential of AI within your organization.

### 2. Overview of Prompt Engineering

Salesforce Prompt Engineering typically refers to the process of designing and refining input prompts for AI models or chatbots that integrate with Salesforce, particularly language models like GPT-3.5. It involves creating



effective inputs or queries that optimize the responses generated by the AI, ensuring that users receive accurate, relevant information and useful responses based on their needs. Overall, prompt engineering in the context of Salesforce is about enhancing user experience and the effectiveness of AI tools integrated into the Salesforce ecosystem. Prompt engineering is essential in effectively utilizing AI models in various applications, such as chatbots, content generation, and automated customer support, ensuring that users get the most value from their interactions with AI. This process include:

#### **A. Understanding User Needs**

Identifying what users are looking for when they interact with the AI interface within Salesforce.

#### **B. Understanding the Model**

Having knowledge about how the AI model interprets and processes language helps in crafting better prompts.

#### **C. Contextual Awareness**

Providing context within the prompts can lead to more relevant responses. This might include offering background information, specifying the format of the answer, or indicating the intended audience.

#### **D. Crafting Effective Prompts**

Prompts should be clear and specific to guide the model toward producing the desired output. Vague prompts may lead to unfocused or incomplete responses.

#### **E. Experimentation**

Experimenting with different types of prompts (e.g., questions, statements, examples) can uncover new ways to achieve better results.

#### **F. Testing and Iteration**

Often, prompts will go through multiple iterations. Continuously testing the prompts to see how well the AI responds and making necessary adjustments to improve clarity and effectiveness helps identify which prompts yield the best responses.

#### **G. Integration with Salesforce Features**

Leveraging Salesforce's data and functionalities (like CRM data, reports, and analytics) within the prompts to deliver tailored responses.

#### **H. User Training**

Educating users on how to interact with the AI effectively to get the best results.

### **3. Key Aspects and Components of Prompt Engineering in Salesforce**

Prompt engineering in Salesforce involves strategically crafting prompts to optimize the performance of AI-driven tools like Einstein GPT. Prompt engineering plays a crucial role in ensuring the effectiveness and relevance of AI-driven solutions. Here are the key aspects of prompt engineering:

#### **A. Understanding the Business Context**

- **Use Case Identification:** Clearly defining business goals is essential. Whether automating customer support, generating sales insights, or creating personalized content, understanding the specific requirements helps tailor the prompts.

- **Role-Specific Prompts:** Prompts should be aligned with the user's role (e.g., sales, customer service, marketing) to generate context-relevant outputs.

#### **B. Understanding the Model**

- **Language Models:** These AI models, trained on vast amounts of text data, generate text based on the input they receive. The better the prompt, the more accurate and relevant the output.

- **Capabilities and Limitations:** Knowing what the model can and cannot do helps in crafting effective prompts. For example, while the model can generate human-like text, it doesn't have real-time information or deep understanding beyond its training data.

#### **C. Crafting the Effective Prompts**

- **Clarity:** A prompt should be clear and specific to avoid ambiguity. This helps the model understand the request and generate a precise response.

- **Instructions:** Directly instructing the model on what is expected, such as "List the benefits of exercise" or "Write a short story about a brave dog," can guide it to the desired output.



- **Specificity:** Precise prompts reduce ambiguity, resulting in more accurate AI outputs. Providing clear instructions and necessary context leads to better responses. The more specific the prompt, the more tailored the output. Vague prompts can lead to generic or irrelevant results, so it's important to include sufficient detail, such as context or constraints, to guide the AI effectively.
- **Balancing Simplicity and Detail:** While prompts must be detailed enough to guide the AI, they should also be concise to avoid overwhelming the model.
- **Examples:** Sometimes including examples in the prompt can lead to more consistent and accurate responses, especially when the task is complex.

#### **D. Contextualization**

- **Context:** Providing sufficient context within the prompt ensures that the model has the necessary information to produce relevant output. Including necessary background or situational details ensures that the AI model understands the environment in which it operates. In Salesforce, this could involve specifying customer data, case history, or a particular business scenario to generate accurate responses.
- **Dynamic Variables:** Use dynamic variables within prompts to pull real-time Salesforce data, such as customer names, product details, or case information, ensuring AI responses are tailored to specific scenarios.
- **Contextual Inputs:** Prompts should consider the broader context, like previous interactions or historical data, to ensure the AI's responses are relevant and actionable.

#### **E. Tone and Style Control**

- **Adjusting Tone:** Depending on the business scenario, prompts can guide the AI to respond in a specific tone, such as formal, friendly, or technical, ensuring consistency with brand voice.
- **Consistency in Tone:** Defining the desired tone of the AI output (e.g., formal, conversational, professional) helps ensure that the AI model's responses align with the company's branding and communication standards.
- **Style Consistency:** When generating content like marketing copy or customer communication, prompts should ensure the AI produces outputs that adhere to a consistent style.
- **Style Adaptation:** For different business functions (sales, marketing, customer support), the style of the prompt can be adapted to match the department's specific communication needs, ensuring consistency across various interactions.

#### **F. Iterative Refinement**

- **Testing Prompts:** Effective prompt engineering is an iterative process. Test prompts using real data to ensure the AI generates useful outputs, and continuously refine them based on feedback and performance.
- **Testing Variations:** Experiment with different phrasings, structures, and levels of detail in prompts to see which generates the best results.
- **Analyzing Outputs:** Evaluate the generated text to determine if it meets the desired outcome. If not, refine the prompt and test again.
- **A/B Testing:** Experiment with different variations of prompts to determine which ones yield the most valuable outcomes.
- **Feedback Loops:** Gathering feedback from users and analyzing AI-generated outputs helps in fine-tuning prompts to ensure they evolve with changing business needs or improvements in AI capabilities.

#### **G. Constraints on Output**

- **Length and Structure:** Setting limits on the length or structure of the response ensures the output is concise and actionable. For example, in Salesforce, you may want AI-generated summaries or recommendations to be limited to a specific word count or format.
- **Response Format:** Depending on the use case, you can design the prompt to produce responses in particular formats, such as bulleted lists, numerical summaries, or formal emails.

#### **H. Handling Edge Cases and Error Handling**

- **Defining Boundaries:** It's important to account for edge cases where the AI may not have enough information or encounter an unusual situation. Prompts can include fallback options, such as "If the information is incomplete, ask for clarification."
- **Uncertainty Management:** Prompts should help the AI manage uncertainty gracefully, such as by prompting the model to request additional details if the data provided is insufficient to generate a reliable output.



- **Fallback Mechanisms:** Prompt engineering should consider how to handle unexpected inputs or edge cases. Providing fallback prompts or human intervention options ensures that critical processes continue without failure.
- **Error Mitigation:** Prompts should be designed to minimize errors or ambiguous responses by providing clear boundaries or rules for the AI to follow.

#### **I. Advanced Techniques**

- **Few-Shot and Zero-Shot Learning:** Using examples within prompts (few-shot) or designing prompts that enable the model to perform tasks it hasn't been explicitly trained for (zero-shot).
- **Parameter Tuning:** Adjusting model parameters like temperature (which controls randomness) or max tokens (which limits response length) to influence the output's quality and style.

#### **J. Leveraging Salesforce AI Tools**

- **Prompt Templates:** Salesforce's Prompt Builder allows users to design, test, and optimize different types of prompt templates (e.g., Text Completion, Summarization, and Classification). Utilizing these tools ensures prompts are structured efficiently and integrated into Salesforce workflows.
- **Einstein GPT:** Understanding how to best utilize Einstein GPT's capabilities for content generation, data analysis, and customer engagement is essential for effective prompt engineering.
- **API and Custom Models:** For advanced use cases, prompt engineering may involve using APIs or custom AI models within Salesforce, enabling more tailored responses based on specific business rules or datasets.

#### **K. Ethical Considerations and Bias Management**

- **Bias Mitigation:** Prompts should be designed to minimize the risk of biased outputs. Ensuring neutrality in the language used can prevent AI models from generating biased or inappropriate responses.
- **Ethical Considerations:** When crafting prompts, it's important to consider the ethical implications of AI responses, ensuring that the prompts do not inadvertently lead to harmful or discriminatory outcomes.

#### **L. Scalability and Adaptability**

- **Adaptability to Change:** As business needs evolve, prompts must be flexible enough to adapt to new requirements, AI model updates, and emerging use cases.
- **Consistent Results Across Use Cases:** As organizations scale, prompt engineering must ensure that AI delivers consistent and accurate results across different departments, use cases, and volumes of interactions. Templates should be reusable and adaptable to various business functions.
- **Documenting Best Practices:** Organizations should maintain documentation of successful prompts and strategies to ensure that as more users engage with AI-driven features, they can replicate proven methods.

#### **M. Managing Complexity**

- **Simplification of Complex Tasks:** Break down complex queries into simpler prompts that can be more easily understood by the AI. For instance, instead of asking the AI to generate an entire business report, divide the task into sections like "summarize key sales metrics" or "list challenges faced this quarter."
- **Handling Multiple Instructions:** Prompts that require the AI to complete multiple tasks (e.g., "Summarize the meeting notes and recommend next steps") should be carefully structured to avoid confusion and ensure the AI addresses all aspects.

### **4. Benefits of Prompt Engineering in Salesforce**

Prompt engineering in Salesforce brings several benefits, particularly as businesses increasingly leverage AI to enhance customer interactions, automate processes, and drive insights. Here are some of the key benefits:

#### **A. Enhanced AI Accuracy and Relevance**

- **Tailored Outputs:** By designing specific prompts, users can guide Salesforce's AI tools (like Einstein GPT) to produce highly relevant and accurate responses that are aligned with business needs.
- **Contextual Understanding:** Prompt engineering allows AI to understand and respond accurately to the nuances of specific business processes, leading to more precise outcomes.

#### **B. Improved User Experience**

- **Intuitive Interactions:** Well-crafted prompts ensure that AI-driven features in Salesforce are more intuitive, making it easier for users to interact with the system and receive the information they need.
- **Personalization:** Prompts can be designed to generate personalized responses based on the user's role, preferences, or previous interactions, enhancing the overall user experience.



### **C. Increased Efficiency and Productivity**

- **Automated Decision-Making:** Effective prompts enable AI to automate routine decision-making processes, freeing up time for employees to focus on more strategic tasks.
- **Faster Resolution Times:** In customer service scenarios, prompt engineering can help AI provide quicker, more accurate solutions, reducing the time required to resolve customer issues.

### **D. Scalability**

- **Consistent Outputs:** As businesses scale, maintaining consistency in AI-driven processes becomes crucial. Prompt engineering ensures that as the volume of interactions increases, the AI continues to provide consistent and high-quality responses.
- **Adaptability:** Prompt engineering allows for the easy adaptation of AI to new business requirements or changes in workflows, ensuring that the system remains effective as the organization grows.

### **E. Better Decision Making**

- **Data-Driven Insights:** Prompts can be crafted to help AI analyze and summarize large datasets, providing decision-makers with concise, actionable insights.
- **Scenario Planning:** AI can be prompted to simulate various business scenarios, helping leaders anticipate outcomes and make informed decisions.

### **F. Reduction in Errors and Bias**

- **Minimizing Ambiguity:** Clear and precise prompts reduce the likelihood of AI misinterpreting a query, leading to fewer errors in output.
- **Bias Mitigation:** Thoughtful prompt engineering can help identify and reduce potential biases in AI-generated content, promoting fairness and inclusivity in automated processes.

### **G. Enhanced Customer Engagement**

- **Proactive Support:** By engineering prompts that anticipate customer needs, AI can engage more proactively, providing helpful information or resolving issues before they escalate.
- **Content Generation:** AI can be prompted to create personalized content, such as emails or product recommendations, that resonate more effectively with customers.

### **H. Cost Savings**

- **Efficiency Gains:** By reducing the need for human intervention in routine tasks and enhancing the accuracy of AI, businesses can achieve significant cost savings.
- **Resource Optimization:** Automated, AI-driven processes mean that resources can be allocated more effectively, reducing waste and optimizing productivity.

### **I. Rapid Prototyping and Innovation**

- **Experimentation:** Prompt engineering enables quick testing of new ideas or workflows within Salesforce, facilitating innovation and the rapid deployment of new features.
- **Continuous Improvement:** With prompt engineering, businesses can continuously refine AI outputs, leading to ongoing improvements in processes and outcomes.

### **J. Strategic Alignment**

- **Business Goals:** Prompt engineering helps ensure that AI outputs are closely aligned with the organization's strategic objectives, making AI a more integral part of achieving business success.
- **Cross-Departmental Use:** Different departments can use tailored prompts to meet their specific needs, ensuring that the AI serves the whole organization effectively.

## **5. Challenges of Prompt Engineering**

While prompt engineering in Salesforce offers significant benefits, it also comes with certain challenges that need to be addressed to maximize its effectiveness. Here are some of the key challenges:

### **A. Complexity of Designing Effective Prompts**

- **Understanding AI Behavior:** Crafting prompts that consistently produce the desired outputs requires a deep understanding of how the AI model interprets and responds to input. Misjudgments can lead to unexpected or irrelevant results.
- **Context Sensitivity:** Prompts need to be carefully designed to provide enough context without overwhelming the AI model. Striking the right balance between detail and clarity can be challenging.



**B. Iterative Refinement and Time-Consuming Process**

- Trial and Error: Achieving the desired outcome often requires multiple iterations of prompt refinement. This can be time-consuming, especially in complex scenarios where the AI's responses are inconsistent or difficult to predict.
- Resource Intensive: Continuous testing and optimization demand significant time and resources, which can be a bottleneck in fast-paced business environments.

**C. Maintaining Consistency across Use Cases**

- Scalability Issues: As prompts are adapted for different departments or use cases within Salesforce, maintaining consistency in AI responses becomes challenging. What works well for one team may not work as effectively for another.
- Customization vs. Standardization: Striking a balance between customizing prompts for specific use cases and maintaining standardized prompts that work across the organization is a delicate task.

**D. Managing Expectations**

- Over-Reliance on AI: There's a risk of overestimating the AI's capabilities based on initial success with prompt engineering. Users might develop unrealistic expectations about the AI's ability to handle complex or nuanced tasks.
- Communication with Stakeholders: Explaining the limitations of AI and the necessity of prompt engineering to non-technical stakeholders can be challenging, especially when the results don't immediately meet expectations.

**E. Dealing with Ambiguity and Open Ended Responses**

- Ambiguous Outputs: Even with carefully crafted prompts, AI may produce ambiguous or vague responses, especially in cases where the prompt itself does not provide sufficient direction.
- Handling Unforeseen Scenarios: AI models may struggle with prompts that lead to responses outside the model's training data or beyond its capability to generate accurate information, resulting in misleading or irrelevant outputs.

**F. Bias and Ethics Considerations**

- Bias in Prompts: If prompts are not carefully designed, they can inadvertently introduce or amplify biases in AI-generated responses, leading to unfair or discriminatory outcomes.
- Ethical Responsibility: Ensuring that prompts are ethically sound and that AI outputs do not violate privacy, fairness, or other ethical standards is a significant challenge.

**G. Technical Limitations of AI Models**

- Model Constraints: The underlying AI model has limitations in understanding complex instructions or generating highly specialized content. Prompt engineering can't overcome all these inherent constraints.
- Response Variability: Even with the same prompt, AI may generate different responses each time, which can lead to inconsistency, especially in critical business processes.

**H. Integration Challenges**

- Seamless Integration: Integrating prompt-engineered AI into existing Salesforce workflows can be complex, particularly when aligning AI outputs with existing business logic or data models.
- API Limitations: There may be constraints in how AI models can be accessed or used within Salesforce, limiting the effectiveness of certain prompts or making integration more cumbersome.

**I. User Adoption and Training**

- User Understanding: Ensuring that users understand how to effectively interact with AI-driven prompts is crucial. If users don't fully grasp how to use or interpret AI responses, the value of prompt engineering is diminished.
- Training Requirements: Providing adequate training to users on how to craft and refine prompts, as well as how to evaluate AI outputs, is essential but can be challenging, especially in large organizations.

**J. Keeping up with Evolving AI Capabilities**

- Model Updates: As AI models are updated or improved, prompts may need to be re-engineered to align with new capabilities or behaviors of the model, creating an ongoing need for monitoring and adjustment.
- Adapting to New Features: Salesforce and AI technologies are constantly evolving, and prompt engineering practices need to adapt to take advantage of new features or changes in AI behavior.



## K. Cost Considerations

- **Development and Maintenance Costs:** The iterative process of developing and refining prompts can be resource-intensive, leading to higher costs in terms of time, labor, and potentially requiring specialized skills.
- **Balancing Investment:** Organizations need to balance the investment in prompt engineering with the expected return on investment, which may not always be straightforward to calculate.

## 6. Overview of Prompt Builder

Prompt Builder empowers developers to design, build, and manage prompt templates efficiently. It allows you to ground your prompts with Salesforce data and fosters seamless reusability within the platform, so you can tap into the power of generative AI with various large language models (LLMs) while taking full advantage of Salesforce CRM data, metadata, and platform features like flows and Apex. Prompt engineering is essential for getting the most out of LLMs.

LLMs are trained on massive datasets, allowing them to perform various advanced tasks without specific examples or demonstrations. This technique is known as zero-shot prompting. However, providing a few examples within the prompt sent to the LLM can enable in-context learning, improving the accuracy of the model's responses. This technique is called few-shot prompting.

- As you add more data examples to the prompt, the number of tokens increases. LLMs have a restriction on the number of maximum tokens they can process in a transaction (also known as the context window), which can restrict the number of examples you can provide in a single prompt. For example, the GPT-4 model from OpenAI has a context window of 128K tokens. Always look for a balance, usually 5-10 good examples improve the response significantly for common use cases.
- Prompt Builder provides versioning, making it easy to build different versions and test out prompts with different example sets.

## 7. Step by Step Implementation of Prompt Engineering in Salesforce

Prompt engineering, particularly in the context of Salesforce, typically refers to creating and refining prompts for AI-driven features, such as Salesforce Einstein, to improve user interaction, data processing, and automation. Here's a step-by-step guide to implementing prompt engineering in Salesforce:

### A. Understand the Use Case

Before diving into implementation, clearly define the use case for which you need prompt engineering. Use cases include:

- **Chatbot responses using Salesforce Einstein.**
- **Automated email suggestions.**
- **Enhanced data input guidance for Salesforce users.**
- **Key Actions**

O Identify the problem or task: Begin by understanding what you want to achieve. Is it to improve customer interactions via a chatbot? To automate repetitive tasks? To guide users more effectively through complex processes?

O Determine the audience: Know who will be interacting with the AI-driven feature. Is it internal Salesforce users, customers, or both?

O Outline objectives: Define clear goals such as improving response accuracy, reducing manual input errors, or speeding up process completion.

### • Example

O Suppose you want to implement prompt engineering in a chatbot (Einstein Bot) to better handle customer queries about order statuses. The use case here is to reduce the number of human agent interventions by providing more accurate and helpful responses directly through the bot.

### B. Setup Salesforce Einstein

#### • Enable Einstein Features

O Go to Setup in Salesforce.

O Search for Einstein in the Quick Find Box.

O Enable the relevant Einstein feature (like Einstein Bots, Einstein Language, or Einstein Vision).



**• Configure Permissions**

○ Go to Profiles or Permission Sets under Setup.

○ Ensure that the appropriate permissions are granted for accessing and using Einstein features.

○ Specifically, check for permissions like “Manage Einstein Bots,” “View and Edit Einstein Bot Templates,” or similar permissions related to the Einstein feature you are using.

**• Example**

○ For a chatbot, ensure that Einstein Bots are enabled and configured properly, and the profiles for the customer service team have access to manage and view the bot configurations.

**C. Define the Prompt Structure****• Key Actions**

○ Determine Input Variables: Identify the key data points that the AI will need to process to generate meaningful prompts. These could be customer names, order numbers, product IDs, or any relevant metadata.

○ Craft Initial Prompts: Write clear, concise, and contextually appropriate prompts. Ensure the language used is aligned with the brand voice and easy for users to understand.

**• Best Practices**

○ Be specific: Clearly define what action or response you expect from the user.

○ Avoid jargon: Use language that is easy to understand, especially if your audience is not familiar with industry-specific terms.

○ Anticipate user responses: Consider how users might respond to prompts and prepare for multiple scenarios.

**• Example**

○ For an order status bot, an initial prompt might be: “Hi [Customer Name], I see you recently placed an order. Would you like to check the status? Please provide your order number.”

**D. Create Prompt Templates (Refer Next Section for Detailed Steps for each type of Prompt Template)****• Prompt Template**

○ Go to Setup in Salesforce.

○ Search for Prompt Builder

○ Click on “New Prompt Template”

○ Create and Customize based on the requirements.

**• Test the Prompt Templates**

○ Use the built-in simulation tools within the Builder to run through different interaction scenarios. Pay attention to the AI’s response based on the input it receives.

**• Example**

○ Write a response to a {customerName} who has raised a complaint about {productName}. Apologize for the inconvenience and offer a solution.

**E. Integrate AI Services (Optional)****• Connect to External AI Services**

○ If Salesforce’s native AI capabilities don’t fully meet your needs, consider integrating with an external AI service, such as OpenAI’s GPT API.

○ This can be done via Apex code, which allows you to call external services and process the responses within Salesforce.

**• Create Custom Apex Class**

○ Write an Apex class to call the AI API. For example, you might create a class that sends user input to the OpenAI API, receives a response, and formats it to be displayed in Salesforce.





```

public class AIIntegration {
    @future(callout=true)
    public static void callAIAPI(String inputText) {
        // HTTP Request and Response
        HttpRequest req = new HttpRequest();
        req.setEndpoint('-https://api.openai.com/v1/engines/davinci/completions>');
        req.setMethod('POST');
        req.setHeader('Authorization', 'Bearer YOUR_API_KEY');
        req.setHeader('Content-Type', 'application/json');
        req.setBody('{"prompt": "' + inputText + '", "max_tokens": 100}');

        Http http = new Http();
        HttpResponse res = http.send(req);

        // Process the AI response and handle in Salesforce
        if (res.getStatusCode() == 200) {
            // Handle success
        } else {
            // Handle failure
        }
    }
}

```

#### • Example

○ If your prompt engineering needs require more sophisticated AI processing than Salesforce's built-in features, integrate with OpenAI's GPT-3 API to generate responses based on user inputs dynamically.

### F. Test and Refine Prompts

#### • Run Simulations

- Use Salesforce's sandbox environment to conduct simulations of user interactions.
- Test edge cases where user input might be unclear or unexpected.

#### • Analyze Responses

- Review how the AI responds to different prompts.
- Collect feedback from real users or stakeholders on the quality of responses.

#### • Iterate

- Adjust your prompts based on the test results.
- Consider changes to the wording, structure, or even the logic behind the prompts.

#### • Example

○ In a bot testing scenario, you might discover that users often enter invalid order numbers. Refine the prompt to provide clearer instructions or add a validation step before processing the number.

### G. Deploy and Monitor

#### • Deploy to Production

- After thorough testing, deploy your prompts to the live environment.
- Use Salesforce's change sets or CI/CD tools if your organization has a more complex deployment process.

#### • Monitor Performance

- Use Salesforce's built-in reporting tools to track key metrics like user interaction success rates, the number of times prompts are triggered, and user satisfaction scores.
- Create custom dashboards to visualize prompt performance.

#### • Example

○ After deployment, monitor how often customers need to escalate from the bot to a human agent. If escalations are high, revisit the prompts to see where improvements can be made.

### H. Continuous Optimization

#### • Gather User Feedback

○ Implement mechanisms for users to provide feedback on the bot's performance, such as quick surveys or feedback forms after an interaction.

#### • Implement Feedback

○ Regularly review feedback and use it to tweak prompts. This could involve altering the language, changing the order of questions, or adding more options for user responses.

#### • Example

○ If feedback indicates that users find the prompts too generic, personalize them based on user data (e.g., using their names, referencing past orders, etc.).



## I. Documentation and Training

### • Document your process

O Maintain detailed records of how prompts are created, tested, and refined. Include information on the logic behind prompt decisions and the data sources used.

O Use tools like Salesforce Knowledge to store and share this documentation within your organization.

### • Train Users

O Provide training sessions for the team members who will be using or managing the AI-driven features.

O Create user guides or instructional videos explaining how to interact with the AI and how to escalate issues if necessary.

### • Example

O Create a quick reference guide for customer service agents explaining how the bot's prompts work, how to override bot actions if necessary, and how to troubleshoot common issues.

## 8. Step by Step Implementation of Prompt Templates

In Salesforce, Prompt Templates are used to create standardized prompts for generating responses from AI models, such as those integrated with Salesforce's Einstein GPT. Salesforce allows you to create different types of prompts depending on the use case. The typical types of prompt templates include Text Completion, Text Summarization, and Text Classification. Here's a step-by-step guide for creating each type of prompt template:

### A. Email Generation Prompt Template

These types of Prompt Templates are often used for content generation like Sales email, Support Case Emails, etc. Below are the steps involved:

#### • Navigate to Prompt Builder

#### • Create a New Prompt

O Click on New Prompt Template and Choose Sales Email as the Template Type.

#### • Define the Prompt Template Parameters

O Name & API Name: Give your Template a Name and an API Name.

O Description: Give a detailed description of the template.

O Recipient Object: To define who the email is for, select either the Lead or Contact object.

O Related Object: Optionally, select a related object, like Account, to include in the Sales Email Template. It enables you to include personalized data in the generated email.

#### • Write the Prompt Template

O Create the base template for the AI to complete, such as:

```
You're a receptionist for the Coral Clouds Resort hotel.
Your name is {!$Input:Sender.Name}, with phone {!$Input:Sender.Phone} and email {!$Input:Sender.Email}.
A guest has just checked-in, and you want to send them a welcome email.
```

#### • Provide clear instructions for Tone and Style if needed.

#### • Test the Template

O Enter sample data to test how the AI responds to your prompt. Adjust if the output doesn't match your expectations.

#### • Save and Deploy

O Save the template and deploy it to relevant Salesforce components like Email, Case Management, or Marketing Campaigns.

### B. Text / Record Summarization Prompt Template

These types of Prompt Templates are often used to condense long pieces of text into concise summaries, useful for summarizing meeting notes, case comments, or customer feedback. Below are the steps involved:

#### • Navigate to Prompt Builder

#### • Create a New Prompt

O Click on New Prompt Template and Choose Record Summary as the Template Type.

#### • Define the Prompt Template Parameters

O Name & API Name: Give your Template a Name and an API Name.



- Description: Give a detailed description of the template.
- Object: To define object type of the Salesforce record to Summarize.
- **Write the Prompt Template**
- Create the base template for the AI to complete, such as:

```
Summarize the concatenation of the contents of the comment bodies of {!$RelatedList:Case.CaseComments.Record
s} along with the text from {!$Input:Case.Subject}, the case priority which is {!$Input:Case.Priority}, and t
he case type which is {!$Input:Case.Type}.
Keep the response to a single short paragraph.
```

- **Set a limit on how long the summary should be (e.g., 2-3 sentences).**
- **You can define a tone for the summary, such as Professional or Concise.**
- **Test the Template**
- Input a sample long text (e.g., case comments or product reviews) and see how well the AI summarizes it. Refine the prompt or adjust the max tokens for the output if necessary.
- **Save and Deploy**
- Save the prompt template and integrate it into Salesforce workflows, such as in the Case Management module or a feedback system.

### C. Field Generation Prompt Template

Field generation prompt templates have a direct relationship to record fields. With the help of Lightning App Builder (LAB), an Einstein button can trigger an assigned prompt template to send a prompt to the LLM and return a response back to the specific field. Below are the steps involved:

- **Navigate to Prompt Builder**
- **Create a New Prompt**
- Click on New Prompt Template and Choose Field Generation as the Template Type.
- **Define the Prompt Template Parameters**
- Name & API Name: Give your Template a Name and an API Name.
- Description: Give a detailed description of the template.
- Object: Select the object that contains the fields you want Einstein to help users complete. For example, to create product descriptions, select Product.
- Object Field: Select the field you want Einstein to help users complete.
- **Write the Prompt Template**
- Create the base template for the AI to complete, such as:

```
You are a support representative who is tasked with creating a short summary
of a case that happened between a customer and a company support rep.
```

- **Test the Template**
- Enter sample data to test how the AI responds to your prompt. Adjust if the output doesn't match your expectations.
- **Save and Deploy**
- Save the template and deploy it to relevant Salesforce components like Record Page in Lightning App **Builder** or an Einstein button that can trigger the prompt to LLM.

### D. Custom or Flex Prompt Template

Flex prompt templates in Prompt Builder offer a versatile and efficient way to automate the creation of text for PDFs, social media posts, newsletters, emails, record fields, and more with Einstein generative AI and the LLM (large language model). Unlike the Sales Email or Field Generation prompt templates in Prompt Builder, Flex templates don't have predefined entry points. You can select any object in your organization to use in the template and apply the completed prompt wherever you see fit. Whether you're using Apex, Flow, REST API, or Copilot, Flex templates are designed to fit your needs. Below are the steps involved:

- **Navigate to Prompt Builder**
- **Create a New Prompt**
- Click on New Prompt Template and Choose Flex as the Template Type.



- **Define the Prompt Template Parameters**

O Name & API Name: Give your Template a Name and an API Name.

O Description: Give a detailed description of the template.

O Sources Object(s): Define up to 5 sources for your flex template.

- **Write the Prompt Template**

O Create the base template for the AI to complete, such as:

```
Write a detailed product description using this information:
The Account Name is {{$Input:Account_Info.Name}}
The Product Info is {{$Input:Asset_Info.Description}}
The Contact Info is {{$Input>Contact_Info.Name}}
```

- **Provide clear instructions for Tone and Style if needed.**

- **Test the Template**

o Enter sample data to test how the AI responds to your prompt. Adjust if the output doesn't match your expectations.

O Test the prompt multiple times with different input values and scenarios.

O Ensure the AI generates correct, actionable recommendations or answers.

- **Save and Deploy**

O Once the custom prompt works as intended, save it and integrate it into relevant business processes within Salesforce.

## 9. Best Practices

Prompt engineering in Salesforce is a nuanced process that requires careful attention to detail to maximize the effectiveness of AI-driven features. By following the best practices outlined below, you can maximize the effectiveness of prompt engineering in Salesforce, ensuring that AI-driven processes deliver accurate, relevant, and valuable outcomes aligned with your business objectives. Here are some best practices to follow:

### A. Understand the Business Context

- **Identify Use Cases:** Start by clearly defining the business processes or tasks where AI will be applied. Understanding the specific needs of these use cases helps in crafting prompts that are aligned with business objectives.

- **Know Your Audience:** Tailor prompts to the users' expertise and roles. Different user groups (e.g., sales reps, customer service agents) may require different approaches to prompts.

### B. Start with Simple, Clear Prompts

- **Clarity and Precision:** Ensure prompts are clear and unambiguous. Simple and direct language often leads to better AI responses. Avoid complex sentence structures or jargon that the AI might misinterpret.

- **Be Specific:** The more specific the prompt, the more likely the AI is to generate a relevant response. For example, instead of asking "What are the sales figures?" specify "Provide the sales figures for Q3 2024."

### C. Provide Sufficient Context

- **Contextual Prompts:** Include all necessary information in the prompt that the AI needs to generate an accurate response. This might include dates, specific customer names, product details, or other relevant data.

- **Use Anchors:** If applicable, anchor the AI with specific examples or instructions. For instance, "Summarize the following customer feedback" followed by a sample input.

### D. Test and Iterate

- **A/B Testing:** Experiment with different versions of prompts to see which ones yield the best results. Small changes can sometimes lead to significant improvements.

- **Iterative Refinement:** Continuously refine your prompts based on the AI's output. Analyze the results and adjust to improve accuracy and relevance.

- **Document and Share:** Keep track of what works and share successful prompt strategies with other teams to ensure consistency across the organization.



### **E. Optimize for Different Scenarios**

- **Handling Variability:** Design prompts that can handle different scenarios or inputs. Consider edge cases and how the AI might respond to unexpected or incomplete data.
- **Custom Prompts for Specific Tasks:** If your AI is used in different departments or for various tasks, create custom prompts tailored to each specific use case.

### **F. Balance Details with Brevity**

- **Conciseness:** While context is important, overly detailed prompts can confuse the AI. Strive to provide just enough detail to guide the AI without overwhelming it.
- **Avoid Overloading:** Don't overload the prompt with too many instructions or questions. Break down complex tasks into simpler, more manageable prompts.

### **G. Leverage Salesforce Tools**

- **Prompt Builder:** Use Salesforce's Prompt Builder to create, test, and optimize prompts without needing deep technical knowledge. This tool helps in structuring prompts effectively.
- **APIs and Integrations:** If using custom AI models, ensure you leverage Salesforce APIs to seamlessly integrate and optimize prompt engineering within your workflows.

### **H. Monitor and Adjust based on Feedback**

- **User Feedback:** Collect feedback from users to understand how well the AI is performing and how it can be improved. This can provide insights into necessary adjustments in prompt design.
- **Continuous Monitoring:** Regularly monitor AI outputs to ensure they remain aligned with business goals. As business needs evolve, be ready to adapt your prompts accordingly.

### **I. Address Ethical and Bias Concerns**

- **Bias Mitigation:** Be conscious of potential biases in your prompts. Ensure that they do not inadvertently introduce or reinforce biases in AI responses.
- **Ethical Considerations:** Design prompts that adhere to ethical guidelines, particularly around privacy, fairness, and transparency. Ensure that users are aware when interacting with AI-driven responses.

### **J. Plan for Scalability**

- **Consistent Standards:** Develop a set of standards or guidelines for prompt engineering that can be applied across different teams or departments. This ensures consistency as the organization scales.
- **Document Best Practices:** Create documentation that captures best practices, successful prompts, and lessons learned. This resource can help new users get up to speed quickly and maintain high standards as the AI is adopted more broadly.

### **K. Stay Updated with AI Developments**

- **Keep Learning:** As AI models evolve, stay updated on new features or capabilities that could impact prompt engineering. Adjust your strategies accordingly to take advantage of the latest advancements.
- **Engage with the Community:** Participate in Salesforce and AI communities to share knowledge, learn from others, and stay informed about the latest trends and best practices in prompt engineering.

### **L. Optimize for Performance**

- **Parameter Tuning:** Adjust parameters like temperature, max tokens, and stop sequences to fine-tune the AI's performance in response to your prompts.
- **Performance Metrics:** Define and track key performance indicators (KPIs) for your AI outputs, such as **accuracy, relevance, and user satisfaction. Use these metrics to guide prompt refinement efforts.**

### **M. Prepare for Unexpected Scenarios**

- **Fallback Mechanisms:** In cases where the AI fails to provide a satisfactory response, have fallback prompts or human intervention options ready. This ensures that critical processes are not disrupted.
- **Scenario Planning:** Anticipate potential challenges or unexpected scenarios in AI responses, and design prompts that can handle these gracefully.

## **10. Conclusion**

In conclusion, prompt engineering in Salesforce plays a pivotal role in maximizing the potential of AI-driven tools like Einstein GPT. By crafting precise, context-aware, and strategically designed prompts, businesses can significantly enhance the accuracy, relevance, and efficiency of AI outputs, enabling smarter automation and



improved decision-making. As AI continues to evolve, prompt engineering will be essential for aligning AI capabilities with specific business needs, ensuring scalability and adaptability in dynamic environments. With best practices in place, including iterative testing, ethical considerations, and role-specific customization, organizations can unlock the full value of AI in Salesforce to drive better customer experiences, streamline operations, and support growth.

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