Templates for strict and extensive prompts utilizing RAG.

Prompt template:1 Extensive_Synthetic_RAG

```
An anomaly with a Median Absolute Deviation (MAD) score of {mad_score} has
been detected in the {service_name} service's {affected_metric} metric,
indicating a substantial deviation impacting its performance. This service
is a critical component of a pet adoption website's microservices
architecture.

    The service relies on the following dependencies:
{dependencies_formatted}.
    The service also serves as a crucial dependency for:
{dependents_formatted}.

    {textual_log}. Use this historic data to support your analysis.

    Focus Areas:
    1. Root cause node and Target Node Identification:
        - What is the singular root cause node among the dependencies and
dependents.
        - What is the primary target node among the dependents directly
impacted by this anomaly
        - Your analysis should focus on identifying a singular root cause
from among the dependencies and dependents.  Consider each dependency's
role and potential issues that could lead to such a deviation.
        - Additionally, pinpoint the primary dependent (target node) that
is most directly affected by this anomaly. This should be the service that
relies on {service_name} and would face the most significant impact due to
the anomaly in {affected_metric}. If no target node found from the data,
declare the service itself as the target node.
    2. Dependencies and Their Impact:
        - Analyze the influence of {service_name} on its direct
dependencies.
        - Assess how issues originating from {service_name} propagate to
dependent services, affecting system performance and reliability.
    3. Pathways of Impact:
        - Map out the key pathways through which the issues are
transmitted within the system.
    4. Metrics and Effects:
        - Evaluate how the issues affect critical performance metrics like
latency and availability.
    5. Mitigation Strategies:
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        - Propose actionable mitigation strategies to address the current
issues.
        - Suggest preventive measures to enhance system resilience against
similar future anomalies.
    Expected Outcomes:
        - Provide detailed insights into dependency-related impacts and
propagation mechanisms.
        - Offer specific recommendations for both immediate resolution and
long-term preventive strategies.
    Instructions:
        - Structure the response to ensure a logical flow, with each
section addressing specific aspects as detailed above.
        - Highlight the importance of data-driven decision-making in
managing microservice architectures.
```

Prompt template 2 Extensive_Training_RAG:

```
 An anomaly with a Median Absolute Deviation (MAD) score of {mad_score}
has been detected in the {service_name} service's {affected_metric}
metric, indicating a substantial deviation impacting its performance. This
service is a critical component of a pet adoption website's microservices
architecture.


    The service relies on the following dependencies:
{dependencies_formatted}.
    The service also serves as a crucial dependency for:
{dependents_formatted}.

    On {time1}, the service {service_name} reported metrics with an
availability of {availability_average}%, an average latency of
{latency_average} ms, and peak latencies at p50: {latency_p50}ms, p90:
{latency_p90}ms, p95: {latency_p95}ms, and p99: {latency_p99} ms. Total
requests were {requests_sum}. Use this data to support your analysis.

    Focus Areas:
    1. Root cause node and Target Node Identification:
        - What is the singular root cause node among the dependencies and
dependents.
        - What is the primary target node among the dependents directly
impacted by this anomaly
        - Your analysis should focus on identifying a singular root cause
from among the dependencies and dependents.  Consider each dependency's
role and potential issues that could lead to such a deviation.
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```
        - Additionally, pinpoint the primary dependent (target node) that
is most directly affected by this anomaly. This should be the service that
relies on {service_name} and would face the most significant impact due to
the anomaly in {affected_metric}. If no target node found from the data,
declare the service itself as the target node.
    2. Dependencies and Their Impact:
        - Analyze the influence of {service_name} on its direct
dependencies.
        - Assess how issues originating from {service_name} propagate to
dependent services, affecting system performance and reliability.
    3. Pathways of Impact:
        - Map out the key pathways through which the issues are
transmitted within the system.
    4. Metrics and Effects:
        - Evaluate how the issues affect critical performance metrics like
latency and availability.
    5. Mitigation Strategies:
        - Propose actionable mitigation strategies to address the current
issues.
        - Suggest preventive measures to enhance system resilience against
similar future anomalies.
    Expected Outcomes:
        - Provide detailed insights into dependency-related impacts and
propagation mechanisms.
        - Offer specific recommendations for both immediate resolution and
long-term preventive strategies.
    Instructions:
        - Structure the response to ensure a logical flow, with each
section addressing specific aspects as detailed above.
        - Highlight the importance of data-driven decision-making in
managing microservice architectures.
```

Prompt template 3: Focused_training_RAG

```
An anomaly with a Median Absolute Deviation (MAD) score of {mad_score} has
been detected in the {service_name} service's {affected_metric} metric,
indicating a substantial deviation impacting its performance. This service
is a critical component of a pet adoption website's microservices
architecture.

    The service relies on the following dependencies:
{dependencies_formatted}.
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```
    The service also serves as a crucial dependency for:
{dependents_formatted}.

    Your analysis should focus on identifying a singular root cause from
among the dependencies and dependents.  Consider each dependency's role
and potential issues that could lead to such a deviation.

    Additionally, pinpoint the primary dependent (target node) that is
most directly affected by this anomaly. This should be the service that
relies on {service_name} and would face the most significant impact due to
the anomaly in {affected_metric}. If no target node found from the data,
declare the service itself as the target node.

    On {time1}, the service {service_name} reported metrics with an
availability of {availability_average}%, an average latency of
{latency_average} ms, and peak latencies at p50: {latency_p50}ms, p90:
{latency_p90}ms, p95: {latency_p95}ms, and p99: {latency_p99} ms. Total
requests were {requests_sum}. Use this data to support your analysis.


    1. What is the singular root cause node among the dependencies and
dependents.
    2. what is the primary target node among the dependents directly
impacted by this anomaly.
```

Prompt template 4: Focused_synthetic_RAG

```
An anomaly with a Median Absolute Deviation (MAD) score of {mad_score} has
been detected in the {service_name} service's {affected_metric} metric,
indicating a substantial deviation impacting its performance. This service
is a critical component of a pet adoption website's microservices
architecture.

    The service relies on the following dependencies:
{dependencies_formatted}.
    The service also serves as a crucial dependency for:
{dependents_formatted}.

    Your analysis should focus on identifying a singular root cause from
among the dependencies and dependents.  Consider each dependency's role
and potential issues that could lead to such a deviation.
```

```
    Additionally, pinpoint the primary dependent (target node) that is
most directly affected by this anomaly. This should be the service that
relies on {service_name} and would face the most significant impact due to
the anomaly in {affected_metric}. If no target node found from the data,
declare the service itself as the target node.

    {textual_log}. Use this historic data to support your analysis.

    1. What is the singular root cause node among the dependencies and
dependents.
    2. what is the primary target node among the dependents directly
impacted by this anomaly.
```

Prompt template 5: WithoutRAG

```
An anomaly with a Median Absolute Deviation (MAD) score of {mad_score} has
been detected in the {service_name} service's {affected_metric} metric,
indicating a substantial deviation impacting its performance. This service
is a critical component of a pet adoption website's microservices
architecture.

    The service relies on the following dependencies:
{dependencies_formatted}.
    The service also serves as a crucial dependency for:
{dependents_formatted}.

    Your analysis should focus on identifying a singular root cause from
among the dependencies and dependents.  Consider each dependency's role
and potential issues that could lead to such a deviation.

    Additionally, pinpoint the primary dependent (target node) that is
most directly affected by this anomaly. This should be the service that
relies on {service_name} and would face the most significant impact due to
the anomaly in {affected_metric}. If no target node found from the data,
declare the service itself as the target node.

    Please provide a concise and focused hypothesis on:
    1. The singular root cause node among the dependencies and dependents.
    2. The primary target node among the dependents directly impacted by
this anomaly.

    Your analysis will guide subsequent investigation and mitigation
efforts.
```