

## Asset Lifecycle Chatbot Training Document

This document provides comprehensive information about the Asset Lifecycle Dataset to help train a chatbot capable of answering user queries related to asset performance, usage, maintenance, and lifecycle.

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### Dataset Overview

- **Dataset Name:** Asset Lifecycle Dataset
  - **Total Records:** 500
  - **Features (Columns):** 7
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### Column Descriptions

1. **asset\_id**
2. *Type:* Integer
3. *Description:* Unique identifier for each asset.
4. **asset\_age\_years**
5. *Type:* Integer
6. *Description:* The age of the asset in years.
7. **total\_usage\_hours**
8. *Type:* Integer
9. *Description:* Total number of hours the asset has been used.
10. **num\_repairs**
11. *Type:* Integer
12. *Description:* Number of times the asset has undergone repairs.
13. **last\_maintenance\_gap\_days**
14. *Type:* Integer
15. *Description:* Number of days since the last maintenance activity.
16. **performance\_score**
17. *Type:* Float (0 to 1)

18. *Description:* A normalized score that indicates the current performance of the asset.

19. **remaining\_useful\_life**

20. *Type:* Float

21. *Description:* Estimated time (e.g., months) that the asset will remain functional.

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## Statistical Summary

Feature	Mean	Min	Max	Std Dev
asset_age_years	9.62	1	19	5.66
total_usage_hours	10192.47	1009	19977	5265.11
num_repairs	1.98	0	8	1.42
last_maintenance_gap_days	191.03	30	364	96.04
performance_score	0.76	0.5	1.0	0.14
remaining_useful_life	15.11	3.77	25.59	4.18

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## Sample Questions Your Chatbot Should Handle:

1. What is the average performance score of assets?
  2. How many repairs has asset ID 150 undergone?
  3. What is the remaining useful life of asset 237?
  4. Which asset has the highest usage hours?
  5. How does the maintenance gap affect performance?
  6. Which assets are likely to fail soon?
  7. How old are the assets in general?
  8. Can you list assets with performance score below 0.6?
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## Chatbot Capabilities

- **Descriptive Answers:** Provide stats, comparisons, and individual asset details.
  - **Analytics Insights:** Trends in maintenance, usage vs. age, etc.
  - **Support Queries:** Flag assets with low life/performance for alerts.
  - **Custom Filters:** Search by asset age, score, or usage.
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## Use for Model Training

You can use this document to fine-tune or train LLM-based retrieval models by chunking the content and embedding it with vector databases (e.g., Chroma, FAISS). Then use a conversational retrieval chain to fetch relevant data based on user queries.

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Let me know if you need a version in a specific format (e.g., Markdown, HTML) or need help building the chatbot app.