ARIA
APPLIED RESEARCH IN ACTION

Machine Learning for Vehicle Diagnostics Automation

Investigating Time Series Classification Methods for Vehicle Failure Mode Detection

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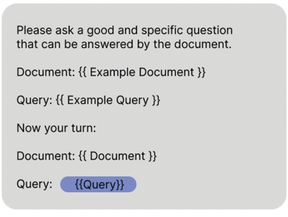
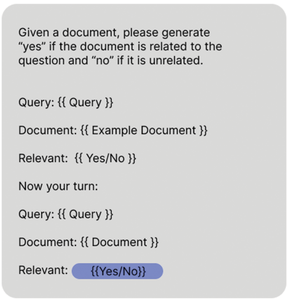
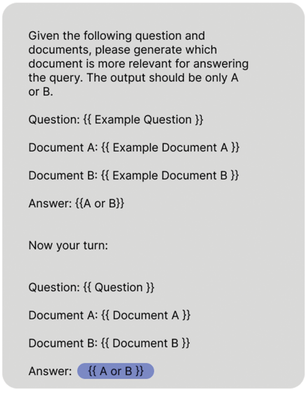


Query Generation



Relevance Filtering



Query-Document Ranking

PROJECT SUMMARY

Tesla vehicles log an extensive amount of data across the various components in the car. This data can be manually inspected by technicians to isolate vehicle issues, but the volume of available data is too large for new failure modes to be detected and validated. This project explores the research and design of machine learning approaches to discover patterns in vehicle data that can be attributed failure modes to scale diagnostic automation. Using both time series and natural language data, we investigate models that can handle various amounts of data while being robust to noise and allow for interpretability.

TESLA

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