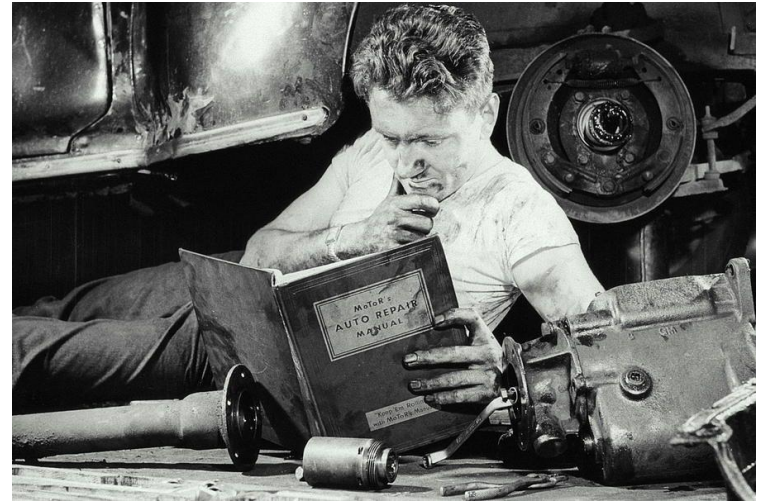# Demo day - MechAInic

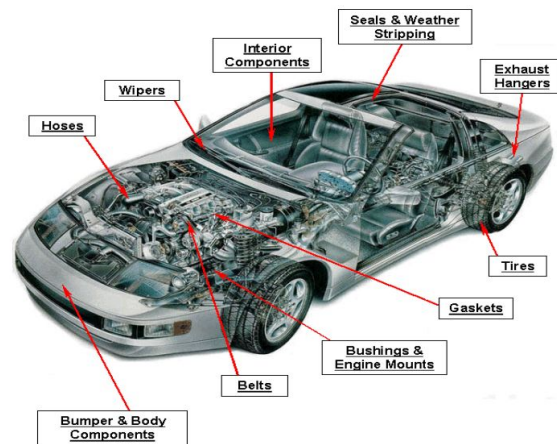**Problem?** Mechanics nowadays handles lot of different vehicles.

- Requires research

- Need to step back from doing repairing

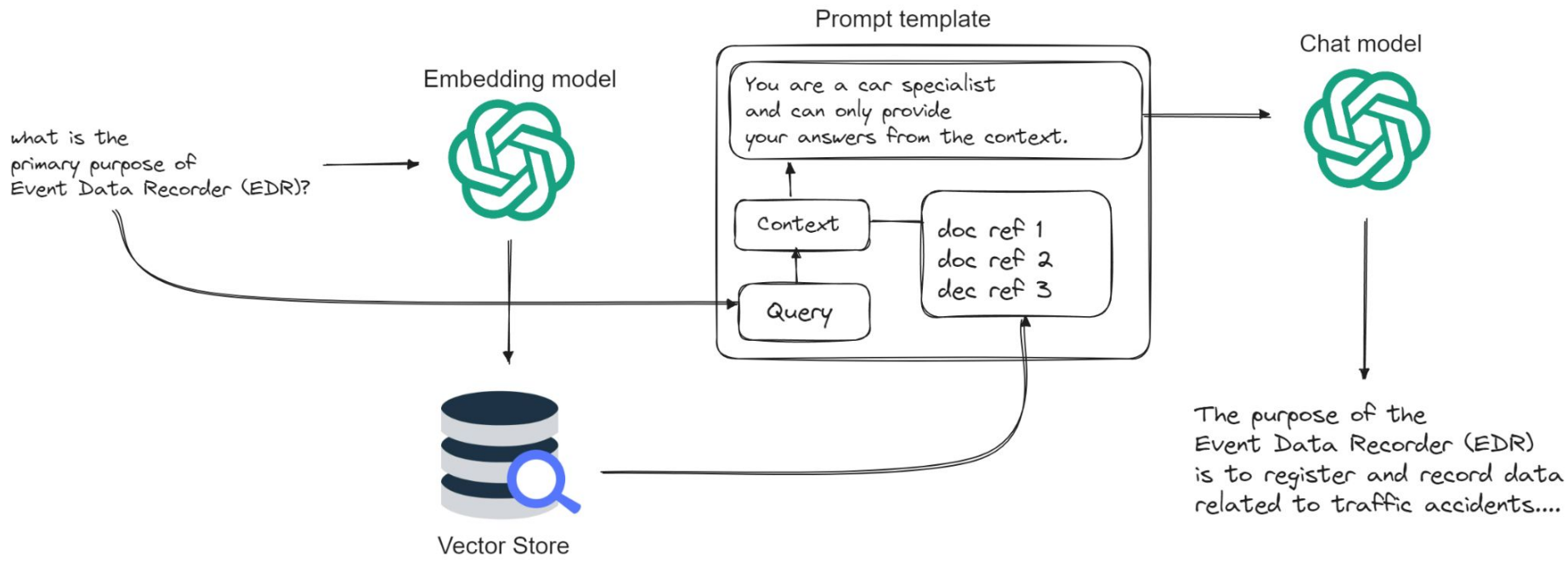- instead go look for information like searching in auto repair manuals

Source: https://shorturl.at/hnGPT

Solution - Make use of a rag system and assistant/tooling

- Use a RAG system to prompt about certain vehicles.

    - repair manuals.

    - manifactures – car parts (experiment)

        - look up Car parts availability

        - order parts

Source: https://shorturl.at/tZ258

what is the primary purpose of Event Data Recorder (EDR)?

Embedding model

Prompt template

You are a car specialist and can only provide your answers from the context.

Context

doc ref 1
doc ref 2
dec ref 3

Query

Chat model

Vector Store

The purpose of the Event Data Recorder (EDR) is to register and record data related to traffic accidents....

Process

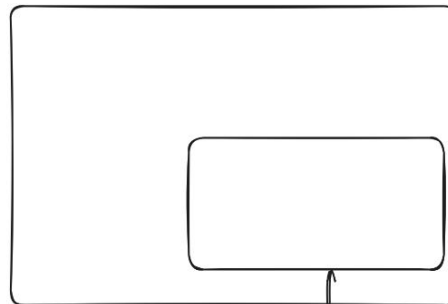Documents → chunk size documents → Embedding model

text-embedding-3-small

↓

Pinecone

prompt template → Chat model

ChatGPT 3.5 Turbo

↓

Answer

So how would mecAInic look like in practice?

Welcome to mecAInics

Here you can search information about cars!

Try it out!

What is the next step?

- Validating the mechAInic RAG system

  - How well does the MecAInic RAG perform on question answering?

- Experiment with using assistants and see how that fit in with the RAG system

Mecainic RAG evaluation - e167f2f0

JSON YAML Compare Tests

Input	Reference Output	#1 Mecainic RAG evaluation - e167f2f0 →

question: how do you manage the centre display?	must_contain:
	- centre display
	- display
		response:
		  content: To manage the centre display, you can control and regulate many of the car's functions through the touch screen interface. The screen reacts differently to actions like dragging, swiping, or tapping. You can interact with the screen using gestures like pressing once to highlight an object, pressing twice to zoom in, and pressing and holding to grab and move objects. Additionally, messages in the centre display can inform or assist the driver, with some requiring acknowledgment or action before they disappear.
		    additional_kwargs: {}
		  response_metadata:
		    token_usage:
		      completion_tokens: 94
		      prompt_tokens: 1100
		      total_tokens: 1194
		    model_name: gpt-3.5-turbo
		    system_fingerprint: fp_3bc1b5746c
		    finish_reason: stop
		    logprobs: null
		  type: ai

#3a5f @ Mecainic - evaluation dataset 6d686d39		▪ CORRECTNESS → ▪ COT CONTEXTUAL ACCURACY → ▪ HELPFULNESS → Show 1 more... ⏱ 4.08s ⊘ SUCCESS 👁 1,194 Open Run
question: how do I adjust the door mirrors?how do I lower the backrests in the rearseat?how do I lock and unlock the car?what is a care key?	must_contain: - door mirrors - door - mirrors	To change the setting for retractable rearview mirrors* when locking: 1.Tap on Settings in the centre display's top view. 2. Press My Car Mirrors and Convenience . 3.Select Fold Mirror When Locked to acti- vate or deactivate the function.
#429b @ Mecainic - evaluation dataset 6d686d39		▪ CORRECTNESS → ▪ COT CONTEXTUAL ACCURACY → ▪ HELPFULNESS → ▪ MUST_CONTAIN : 0 Show less ⏱ 5.76s ⊘ SUCCESS 👁 1,871 Open Run
question: what is the primary purpose of Event Data Recorder?	must_contain: - EDR	⬛The driver's use of the accelerator or brake pedal ⬛The travel speed of the vehicle
		▪ 🔗 CORRECTNESS ▪ 🔗 COT CONTEXTUAL ACCURACY ▪ 🔗 HELPFULNESS ▪ 🔗 MUST_CONTAIN : 0 Show less P50: 4.08s P99: 5.72s

Experiment - car parts availability & order?