



LLM-powered app for safer machinery troubleshooting



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Service offered: LLM-powered app development for a manufacturing company

Industry: Manufacturing

BACKGROUND

A well-known manufacturing company from Saudi Arabia approached us to design an LLM-powered app to streamline processes by enhancing machinery troubleshooting and improving the safety protocol adherence of its employees within the manufacturing sector.

The client previously faced the challenge of managing different machinery types, at the same time ensuring its worker's adherence to safety protocols. Also, workers were in the position to undergo a time-consuming and ineffective process to initiate repairs for malfunctioning machines.

SOLUTION IMPLEMENTED

- Our team thoroughly analyzed the requirements and built a custom LLM-based app that smoothly integrated the enterprise's dynamic safety policies and static machinery information.
- We adopted a hybrid approach, combining LLM-fine tuning developed for static equipment information with embedding approaches dedicated to dynamic safety policies.
- The system was built meticulously with several astounding features such as a user-friendly interface, safety compliance, effective troubleshooting options, requisite form automation, etc.
- Prompt engineering approaches offered context-aligned guidance to the workers, ultimately leading to a safe and efficient work environment.

OUTCOMES



2X

Reduction in process complexity



3X

Improvement in safety protocol adherence

The client was so happy with the app's performance that minimized on-floor accidents, provided ready access to accurate data, enhanced troubleshooting efficiency, automated knowledge sharing, etc. As the app was built within a short period, the client was able to streamline its complicated processes quickly and expand its production by double within the next 6 months.

Technology Used

 FastAPI

 PostgreSQL

