Wabash Chatbot and Commercial Analytics

Ranav Sethi, Divij Aggarwal, Ji Bing Ni, Vihaan Kodeboyina, Manasa Neruganti, Sathvik Valluri, Aarya Patnaik
Ritvik Sehgal, Sameer Vasudeva, Harshal Suresh Pawar, Sicheng He, Manasvi Reddy Kothakota, Aman Dinesh Oswal

INTRODUCTION

- Wabash National is an industrial manufacturing giant aiming to digitally transform their operations by building advanced data analysis capabilities and a conversational AI agent for customer support.

- Integrating **Google Analytics and Power BI,** our analysis provides **real-time visualization** of key performance metrics to **optimize e-commerce efficiency.**

- Enabling seamless integration, our analytics dashboard is **designed to be incorporated into Wabash National's systems** for improved accessibility and usage in their weekly sprints.

- Furthermore, managing large-scale product inquiries on their website efficiently is critical to enhance user experience and boost sales.

- Integrated with **PostgreSQL** and **Azure CosmosDB,** our **AI-powered chatbot** accomplishes this by generating **instant responses to product parts-related queries -** delivering high customer satisfaction and operational efficiency.

FEATURES

- **Real-Time Dashboards** – Live KPI tracking on Power BI.
- **E-Commerce Insights** – Key metrics for traffic and purchases.
- **Seamless Integration** – Unified view across tools
- **Custom Reporting** – Filtered views for analysis.
- **Scalable Framework** – Supports data expansions
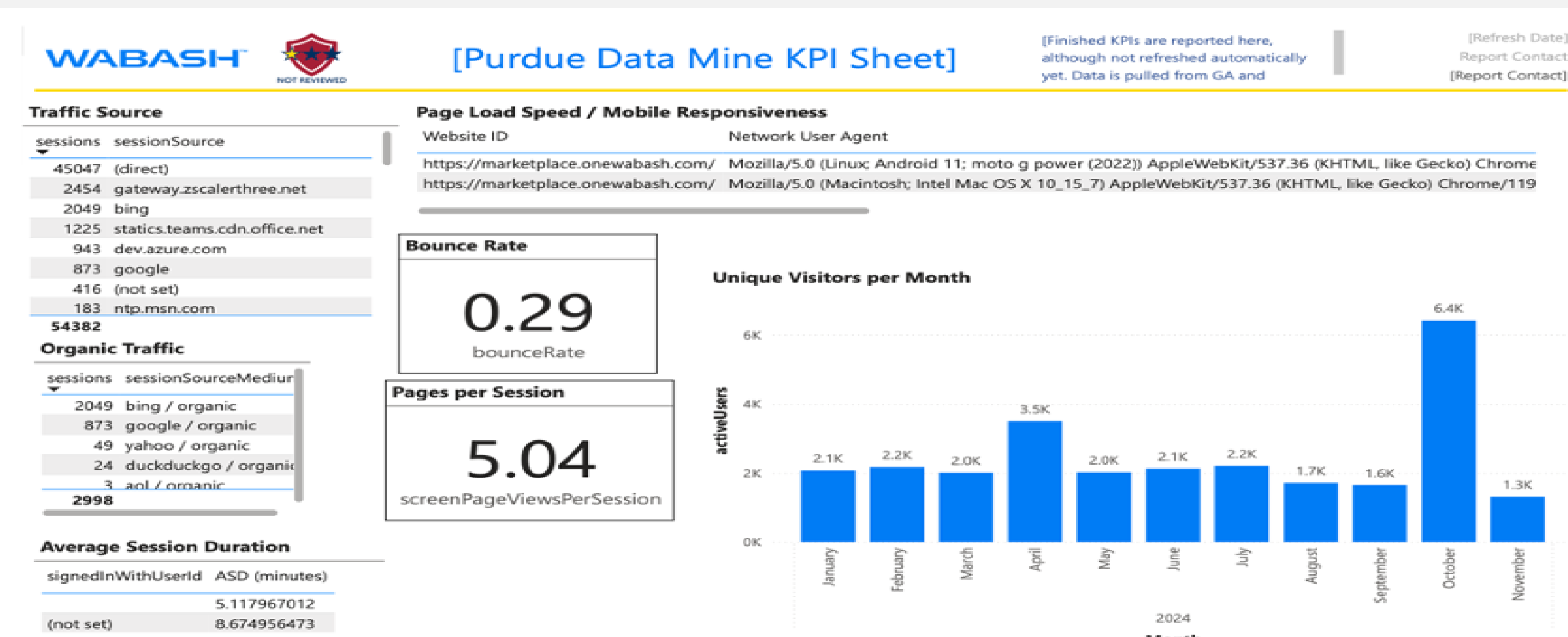
Wabash Parts Bot

Hi! How can I assist you today?

do you have mud flaps

Yes, we do offer mud flaps. Please let me know if you need more information!
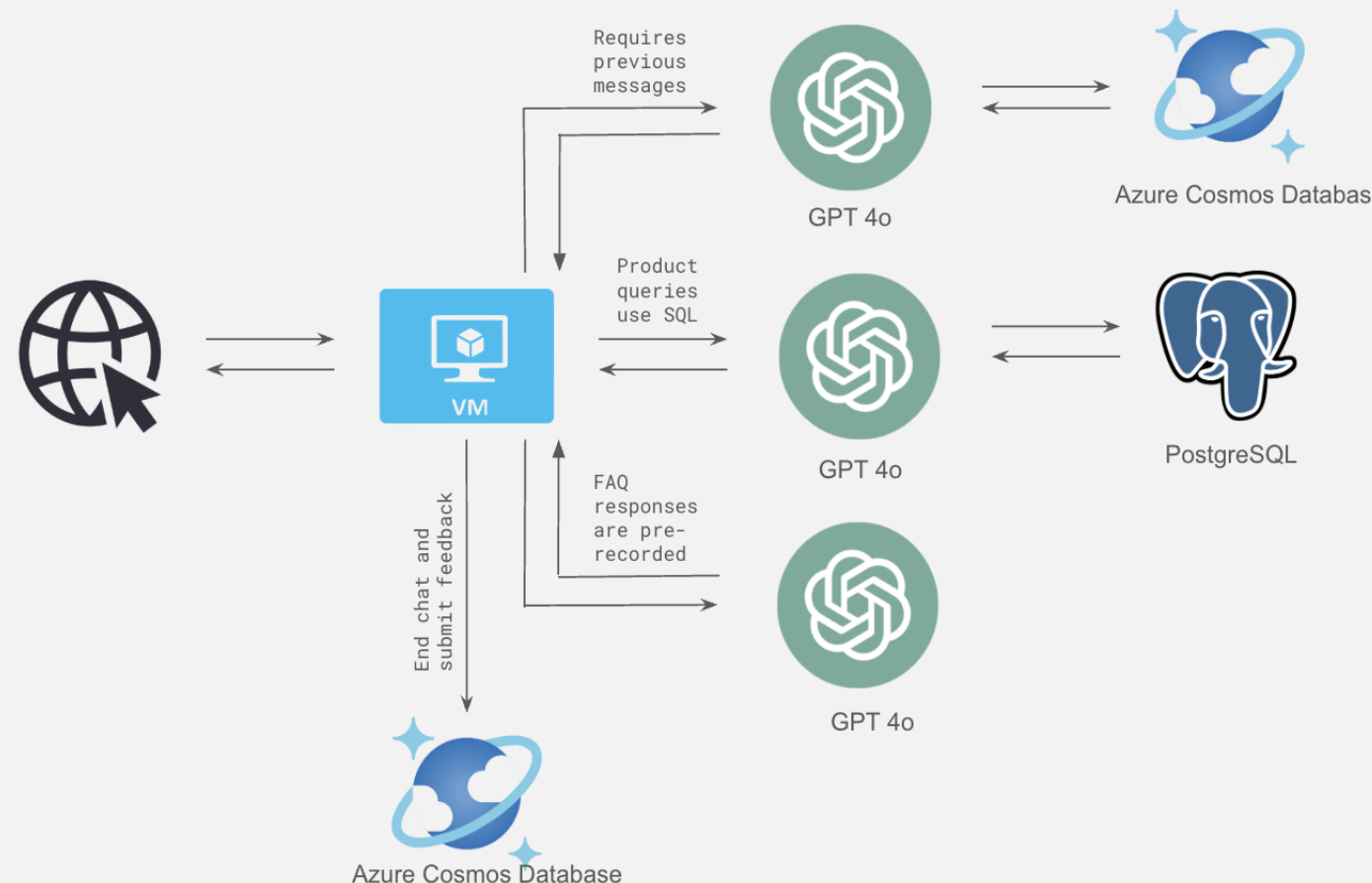
what's your cheapest one?

Here's the information regarding the cheapest item:

– Item Code: MFW23751/2
– Description: MUD FLAP WASHER

Enter a message...

METHODOLOGY

FEATURES

- **Product Queries** – Provides quick and accurate details on Wabash products.

- **FAQs** – Instant answers to common questions.

- **Conversation History** – The model can access previous messages by the user and itself for context.

- **Feedback Collection** – The chatbot collects user ratings and feedback for improvement.

- **Downloadable Transcripts** – Users can save and review chats.

FUTURE GOALS & CONCLUSION

- The final chatbot efficiently answers **product-based questions and FAQs**. It can also **refer to previous messages** and **retains feedback** to set up future analytics.

- Next, we aim to enable users to **track past purchases, reorder seamlessly,** and provide users with **billing details and payment history.**

- The current analytics dashboard **visualizes key performance indicators** such as organic traffic and repeat purchase rate, helping Wabash **monitor e-commerce efficiency and customer behavior** in real time.

- Moving forward, we aim to **expand KPI tracking,** introduce **predictive insights** for sales and inventory planning, and strengthen the Power BI – Google Analytics integration for **more actionable reporting.**

ACKNOWLEDGEMENTS