

SUCCESS STORY

GEN AI – FUSO Chatbot

Transforming Complex Business Data into Actionable Insights Through AI-Powered Conversational Analytics

Company Name

FUSO

Industry

Automotive / Commercial Vehicles

Location

Japan

Impact

Enabling Accessible, AI-Powered Business Insights for Faster, Self-Service Decision-Making

Application

FUSO Chatbot

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A CASE STUDY

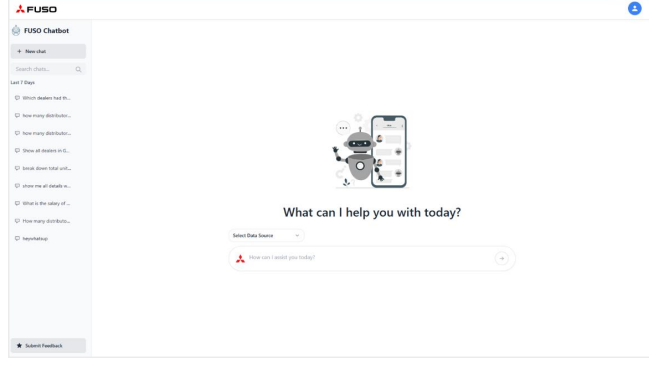
Bridging Business Data and Decision-Making Through AI-Powered Analytics

Background

FUSO, part of Mitsubishi Fuso Truck and Bus Corporation (MFTBC), operates across more than 50 countries, with hundreds of sales outlets. Its business data covers dealer and distributor information, vehicle sales, service operations, workforce, revenue, and regional performance.

Previously, business users often depended on technical teams to extract and filter the required data, prepare spreadsheets or reports, and create charts for further analysis. This manual process made accessing specific business insights more time-consuming.

Cubastion developed the chatbot to make this extensive business information easier to access and analyse, helping users obtain relevant insights without having to navigate complex database structures.



Problem Statement

FUSO required a business-focused analytics platform capable of transforming complex dealer and distributor data into accessible, reliable, and actionable insights, without dependency on technical expertise for every query.

The challenge was to bridge the gap between complex dealer data and the business insights users needed.

Challenges Faced

• Complex Data Structures

Dealer and distributor information involved numerous fields and relationships that needed to be interpreted correctly.

• Business Language vs. Database Language

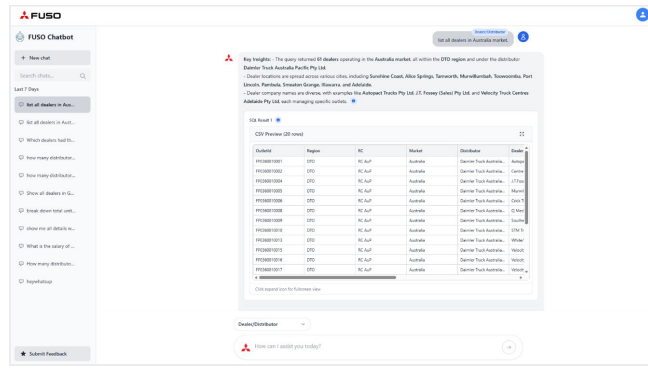
Everyday business questions had to be translated into accurate database queries, even when users' terminology differed from field names.

• Inconsistent Data Formats

Missing values, varying date formats, and numbers stored as text required careful handling to support accurate analysis.

• Multilingual Interpretation Requirements

Business questions needed to be understood in both English and Japanese, including differences in terminology and phrasing.



Solutions

Cubastion designed and implemented the FUSO Chatbot, an AI-powered conversational analytics and business intelligence platform that combines natural-language data retrieval with advanced statistical analysis, automated visualisation, and multi-stage research.

The solution was developed as a single interface through which users can ask questions in English or Japanese, review answers, charts, and analytical findings, and continue their exploration through follow-up questions.

🕒 Natural-Language Query Processing

Interprets user intent, maps business terminology to database fields and filters, converts questions into database queries, and uses conversation history to support follow-up questions without repeated context.

📊 Advanced Statistical Analysis

Supports correlation, regression, distribution analysis, group comparisons, and correlation matrices. Validates analytical suitability for available data and explains limitations.

🔍 Smart Business Information Search

Uses Azure AI Search and vector embeddings for meaning-based retrieval rather than exact word matching. Supports document retrieval, general knowledge queries, and data field questions with source references.

👤 Multi-Agent Research & Investigation

Coordinates eight specialised AI agents for query planning, hypothesis generation, data quality, statistics, visualisation, pattern detection, validation, and insight synthesis. Supports eight research types including exploratory, temporal, geographic, root cause, comprehensive, hypothesis testing, comparative, and predictive analysis. Includes staged research, progress tracking, and PDF report compilation.

📄 Automated Visualisation & Reporting

Automatically selects from 19 chart types based on data and user questions, displays charts within the conversation, and exports findings to PDF, Excel, and PowerPoint.

🔑 Text Mining & Pattern Identification

Extracts key terms, recurring themes, and patterns from unstructured dealer comments, descriptions, and feedback, enabling analysis alongside structured dealer data.

🌐 Bilingual Language Support

Detects question language, supports translation where required, maintains English and Japanese business terminology mappings with Japanese text processing, and responds in the user's language wherever supported.

🔒 Controlled & Safe Data Access

Restricts execution to approved, read-only operations and blocks destructive database operations. Identifies and explains missing fields, invalid queries, permission errors, timeouts, and insufficient data.

🔐 Secure & User-Centric Experience

Implements Microsoft authentication and user-level session questions. Provides suggested follow-up questions, a collapsible query viewer, loading indicators, research progress updates, chat pinning and deletion, and user feedback and rating options.

🏢 Enterprise-Grade Architecture

Uses Python and FastAPI for the backend, React and TypeScript for the frontend, and Docker for containerised deployment.

Business Outcomes

Routine Business Insights

95% Faster

Answers arrive in under 1 minute, against an estimated 20 minutes on average through the manual process.

Specialist Effort Saved

200 hrs/year

With half of 100 monthly routine requests handled through self-service at 20 minutes of manual handling each, about 17 hours a month are freed, equivalent to 5 working weeks annually

Language Accessibility

2 Languages

Questions are understood and answered in English or Japanese, so language is no barrier to using FUSO's business data.

Exploratory Analysis

90%+ Faster

Analysis that took several hours is completed in about 8 minutes, supported by eight specialised AI agents running multi stage research.

Unified Analytics Platform

3 to 1 Interface

Data extraction, statistical analysis & charting no longer need separate handoffs. 19 chart types are selected automatically, & findings export to PDF, Excel & PowerPoint.

Reduced Technical Dependency

Fewer Requests

Business users retrieve information, compare dealer performance, and explore metrics on their own, without raising a request.

Key Areas of Expertise Demonstrated

• Enterprise AI Solution Engineering

Development of domain specific AI applications tailored to complex business requirements.

• Enterprise Data & AI Integration

Connecting AI capabilities with structured business data & contextual information sources.

• Advanced Analytical Solution Design

Combining statistical techniques and AI-driven workflows to support complex business investigations.

• Data Engineering

Managing complex datasets & addressing data inconsistencies to support reliable analysis.

ABOUT CUBASTION

Cubastion helps global companies run their mission critical systems and operations while modernizing IT, optimizing data architectures, and ensuring security and scalability across platforms. Some of the world's largest companies and Indian Public Sector Undertakings trust Cubastion to deploy services to drive new levels of performance, competitiveness, and customer experience.

Over 18 years, Cubastion has built solutions that impact over 500+ million people around the globe working in different demographics across different cultures. Learn more about Cubastion at www.cubastion.com

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