

TITLE: MEX ASSISTANT: AI-POWERED ECONOMIC EMPOWERMENT FOR GRAB MERCHANTS

TEAM SUDO_CHILL

UMHACKATHON 2025 • DOMAIN 3



THE CHALLENGE & OPPORTUNITY

Empowering Merchants in a Dynamic Market

01



OPPORTUNITY

Use AI for personalized guidance
directly in Grab ecosystem

02



CHALLENGE

Merchants need real-time data and
insights. Language and technical skill
barriers exist.

Vission: empowering partners



SOLUTION: MEX ASSISTANT

Your AI Business Partner

01

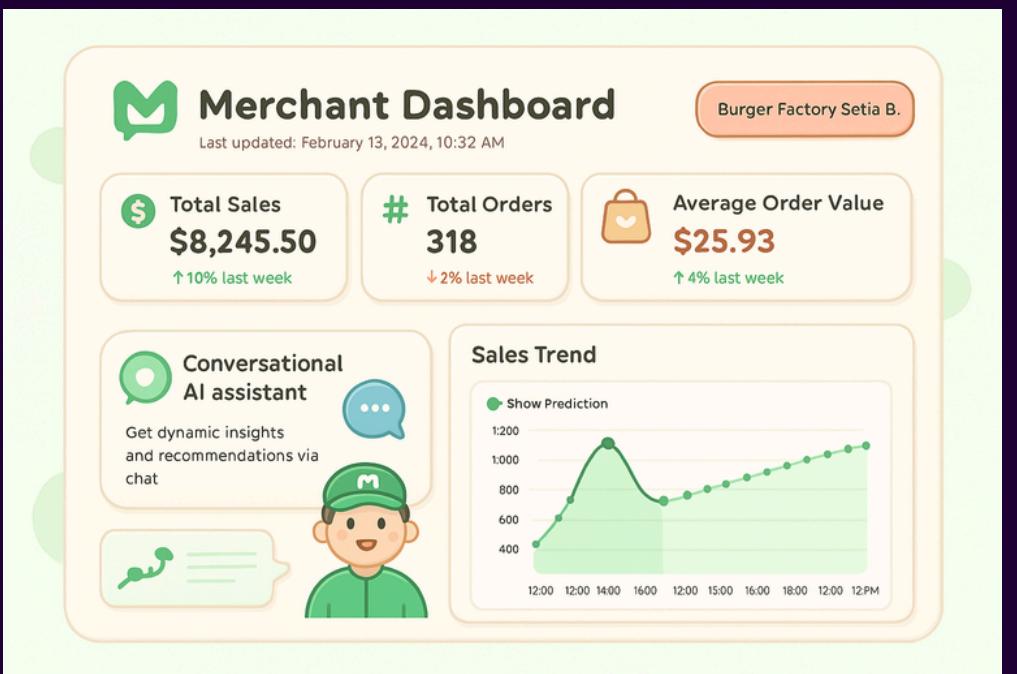
PROACTIVE GUIDANCE

- Monitors data and alerts merchants to key insights or anomalies.



02

INTEGRATED VISUAL DASHBOARDS:



03

CORE VALUE:

- Real-time analytics
- Personalized insights
- Accessible to all merchants



KEY FEATURES & INNOVATION

Data-Driven Insights, Delivered Intuitively

DASHBOARD HIGHLIGHTS



- **Visualize trends:** Sales, Orders, Peak Times, Top Items
- **AI Insights:** Smart recommendations powered by predictive models & anomaly detection
- **Boost efficiency:** manage inventory, catch anomalies early

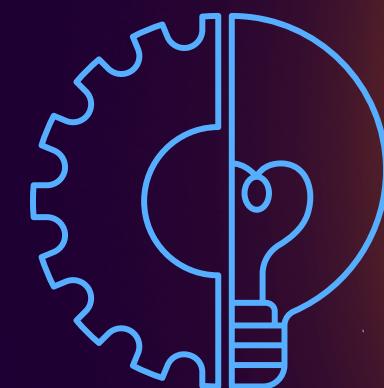
AI CHAT ASSISTANT



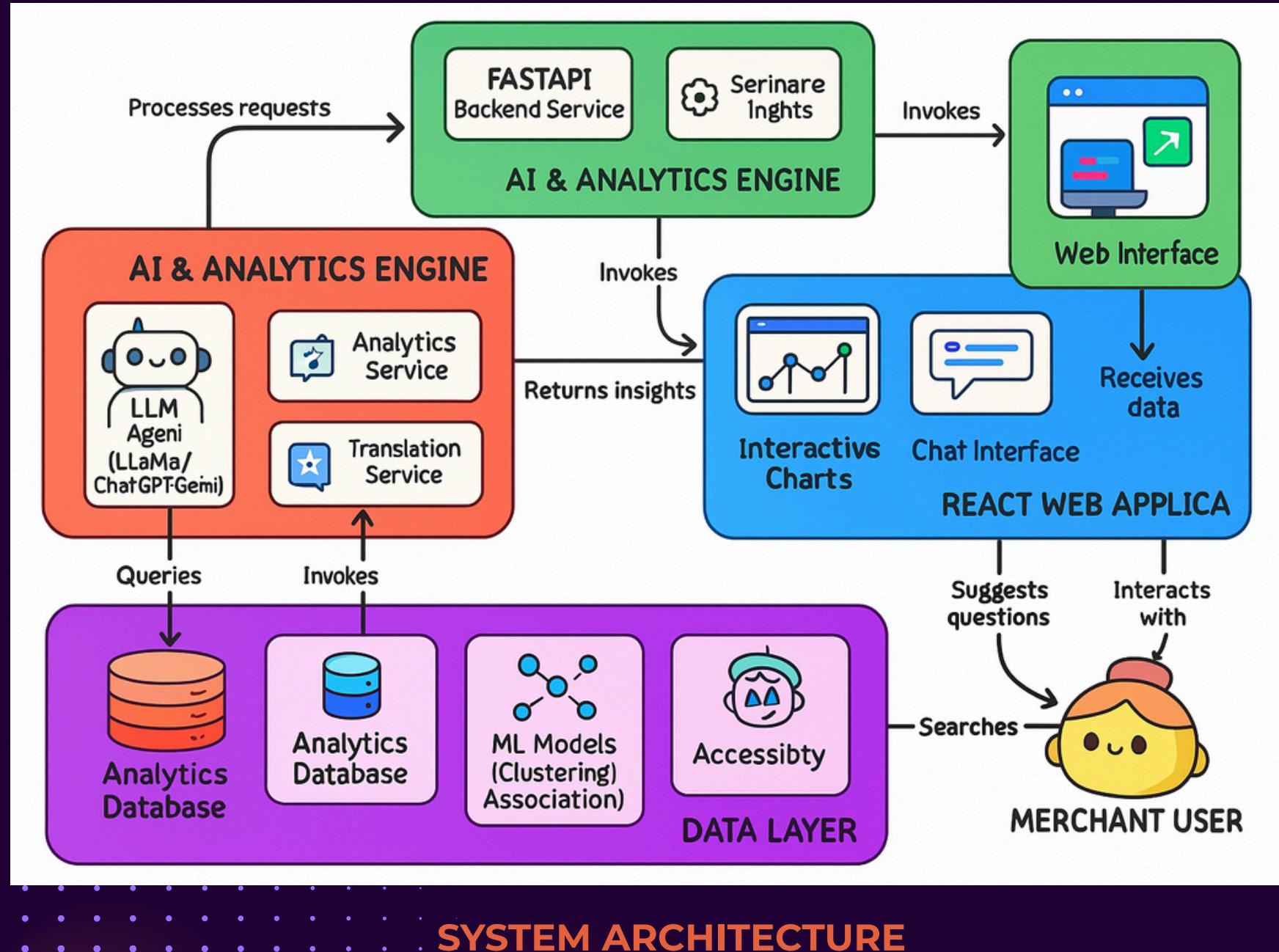
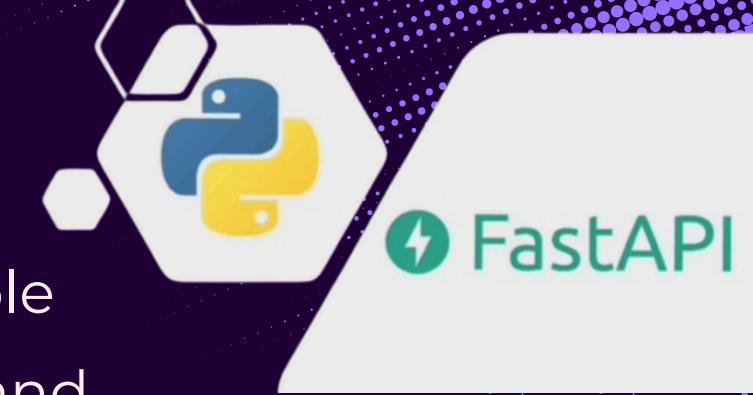
- **Natural language** queries for any dashboard metric or insight.
- **Context-aware responses** using merchant data & selected filters.
- **In-chat visualizations** (charts, tables) for clarity.

INNOVATION FOCUS

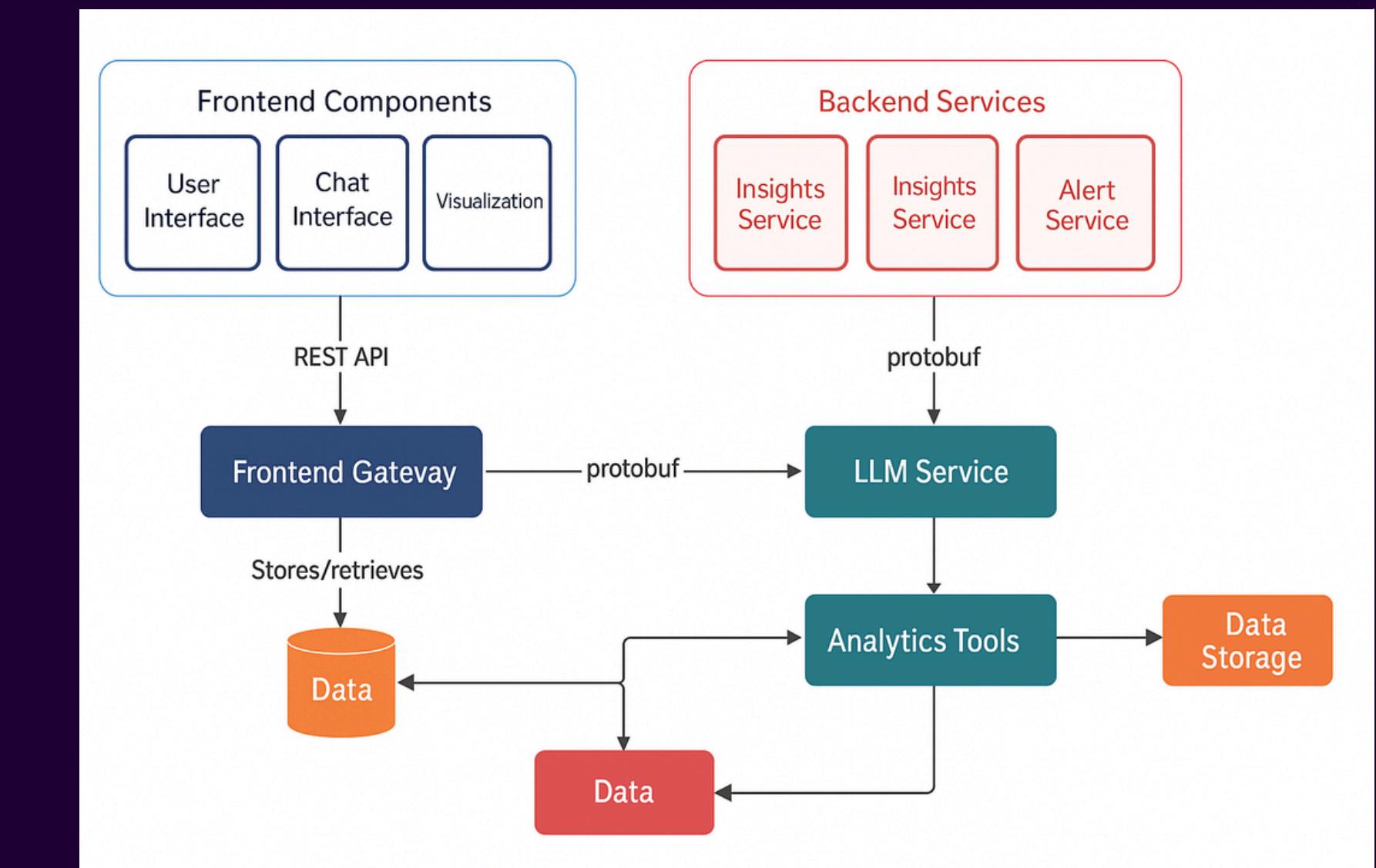
- **Hybrid interface** (Dashboard + Chat) catering to different user preferences.
- **Advanced AI Agent:** Uses LLM + Tools (via LangChain concept) for complex data retrieval and analysis.
- **Built-in multilingual support** for SEA's diverse merchant base.



TECHNICAL EXECUTION & ARCHITECTURE

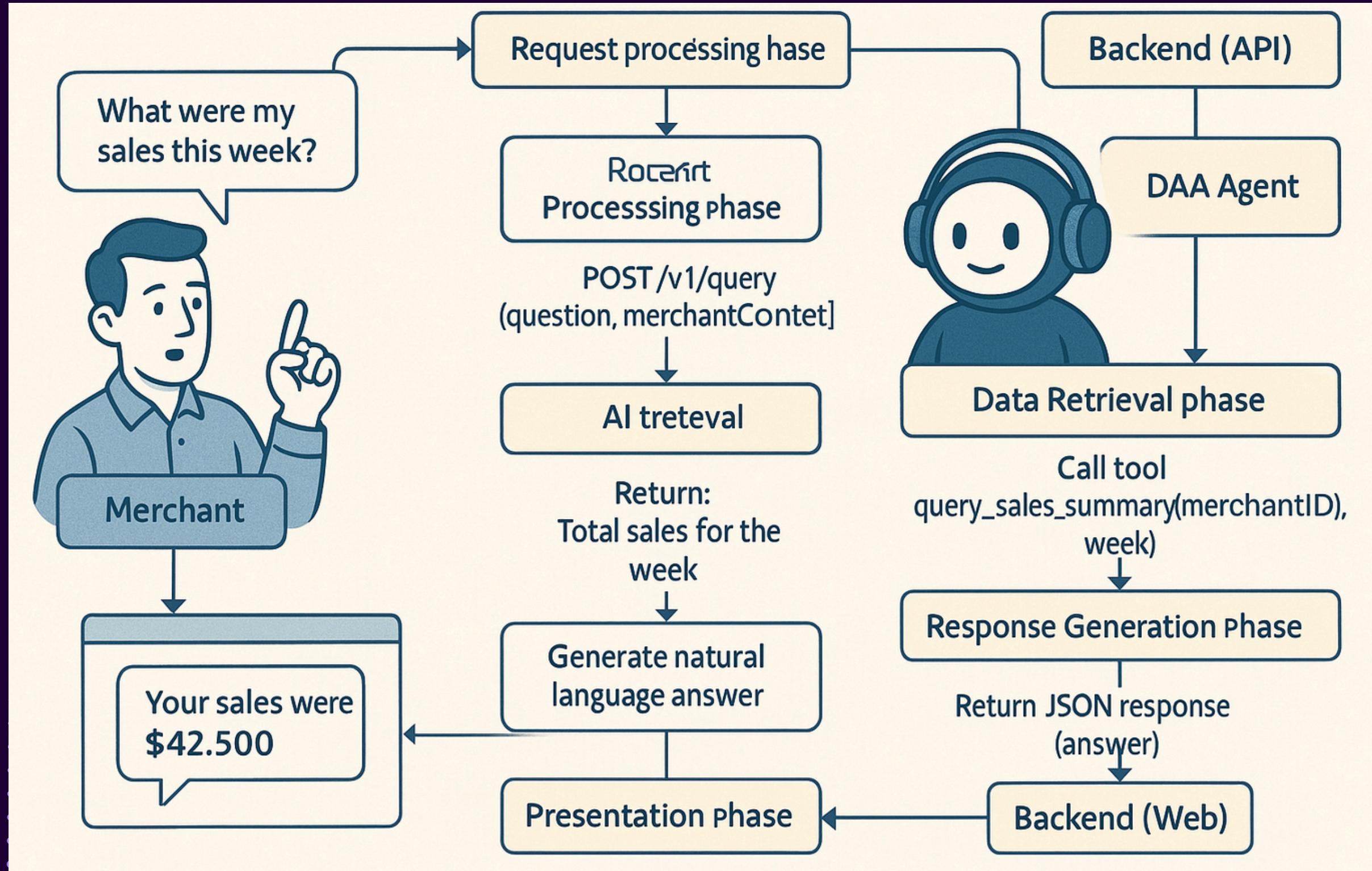


Our project uses a modular, scalable setup with a React+Vite frontend and Python backend. This separation ensures a smooth user experience, with data processing and AI handled server-side.

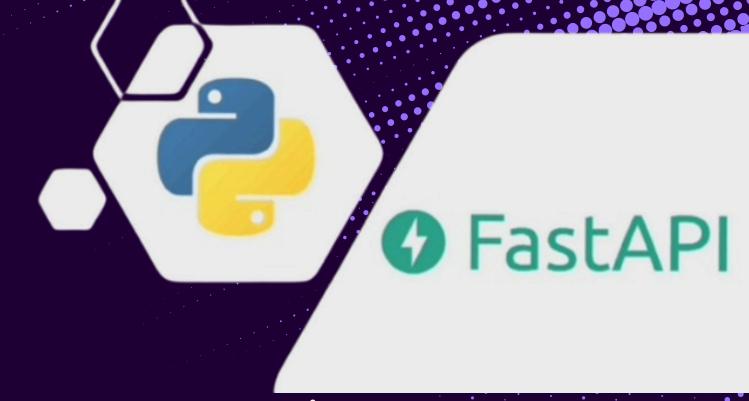


TECHNICAL EXECUTION & ARCHITECTURE

-----SEQUENCE DIAGRAM OF ASSISTANT QUERY FLOW



- Merchant enters queries.
- Queries are sent to the frontend.
- The frontend calls the backend API.
- The query is passed to the dialog manager (LLM Agent).
- The LLM processes the query.
- The LLM may call upon Analytics & Data Tools (functions backed by the Analytics Database/Data store) to fetch required information.
- Once the data is retrieved and the LLM formulates an answer, the backend returns the response to the frontend.
- The frontend displays the answer to the user.



IMPACT & USEFULNESS

Driving Merchant Success Across Southeast Asia



MERCHANT EMPOWERMENT

- Data-driven decisions and operational efficiency



ALIGNMENT WITH GRAB

- Directly supports economic empowerment goal



ACCESSIBILITY

- Powerful analytics available to everyone

EMPOWERING GRAB MERCHANTS WITH AI-DRIVEN INSIGHTS

Delivering real-time, personalized business guidance across Southeast Asia



Real-time Data Integration

Get live sales, delivery, and item insights from Grab's platform to guide instant decisions.



Enhanced Insights Expansion

Drive growth through promo suggestions, pricing optimization, and demand trends.



Merchant-Centric Testing

Continuous testing with **SEA merchants** for enhanced usability and relevance



Deeper Ecosystem Integration

Integrated workflows in GrabFood to optimize operations and enhance partner satisfaction.

Let's bring real-time insights and growth to every GrabFood partner.

THANK YOU!

QUESTIONS & ANSWERS

We appreciate your attention and welcome your questions.

[Watch Our Demo Here](#)

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Github:<https://github.com/ziflhighan/mex-assistant-frontend>