

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

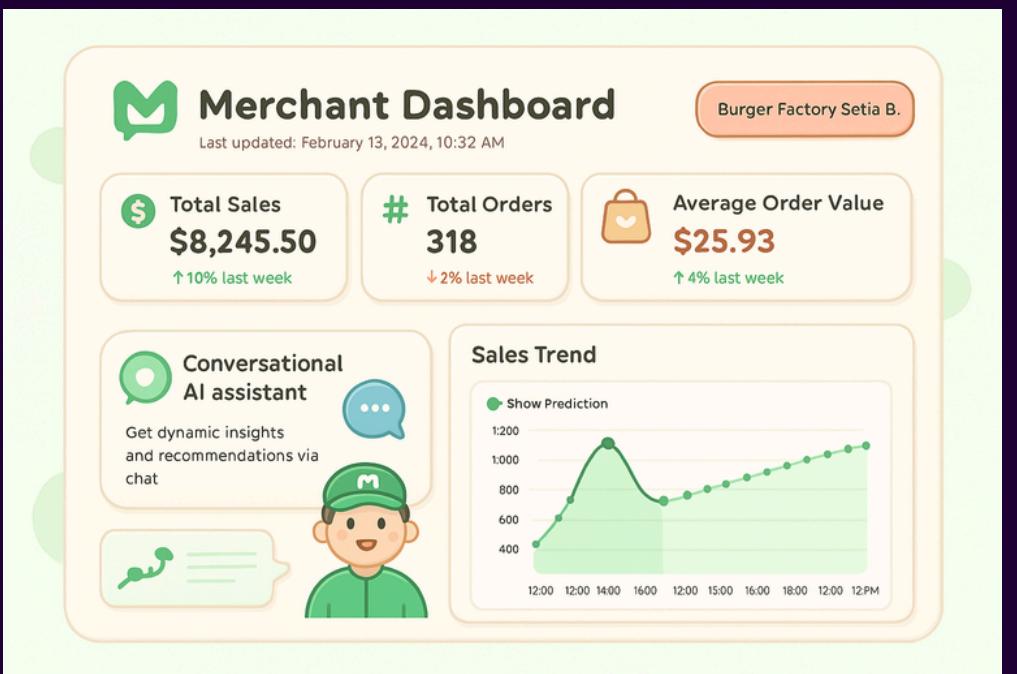
PROACTIVE GUIDANCE

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



02

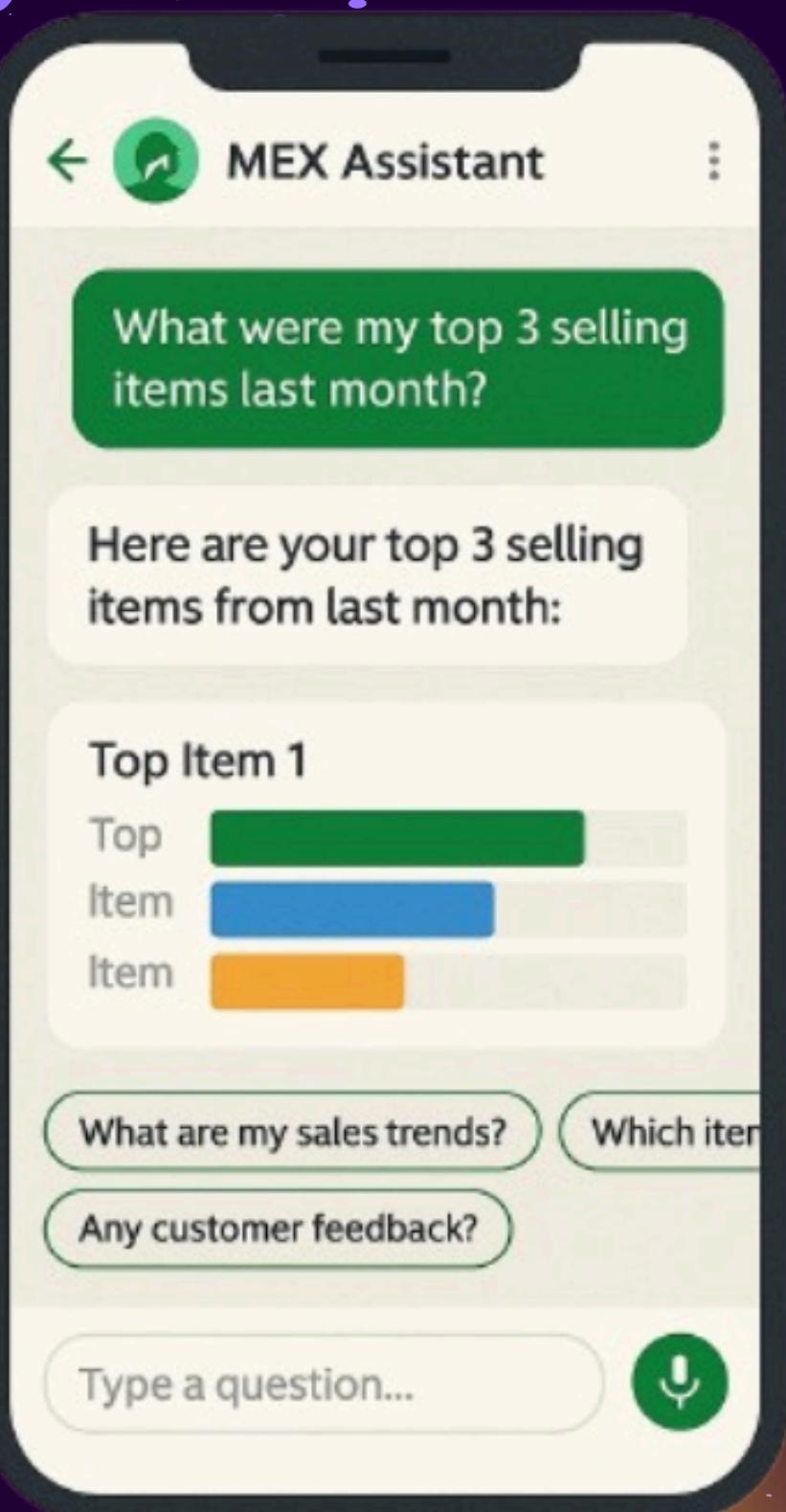
INTEGRATED VISUAL DASHBOARDS:



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

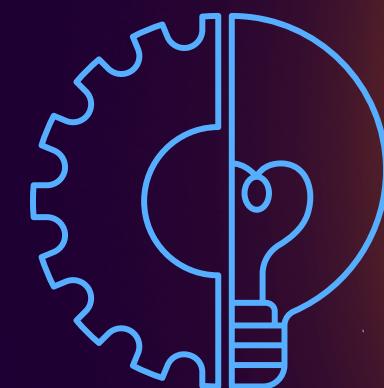
AI CHAT ASSISTANT



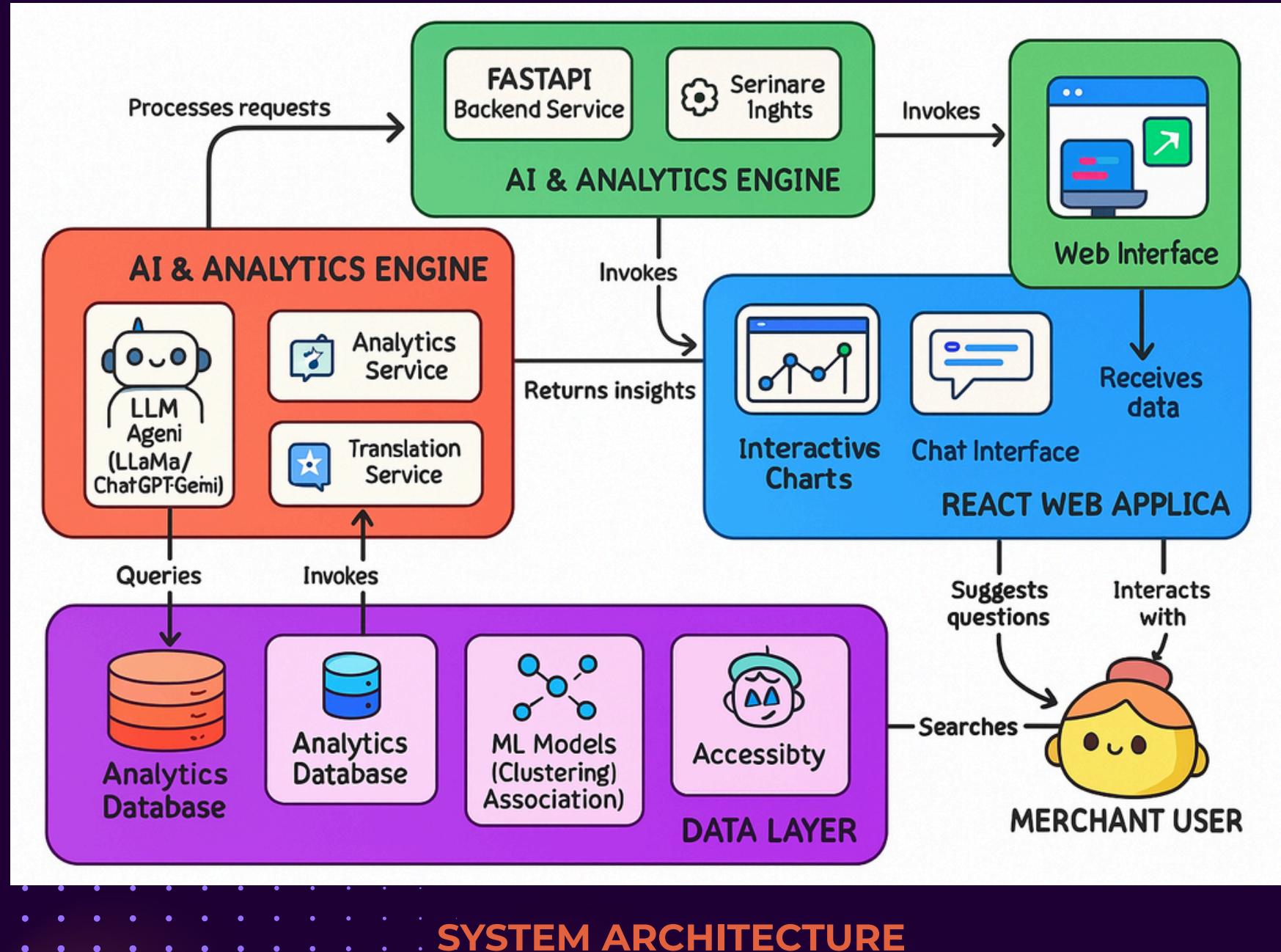
- **Natural language** queries for any dashboard metric or insight.
- **Context-aware responses** using merchant data & selected filters.
- **In-chat visualizations** (charts, tables) for clarity.

INNOVATION FOCUS

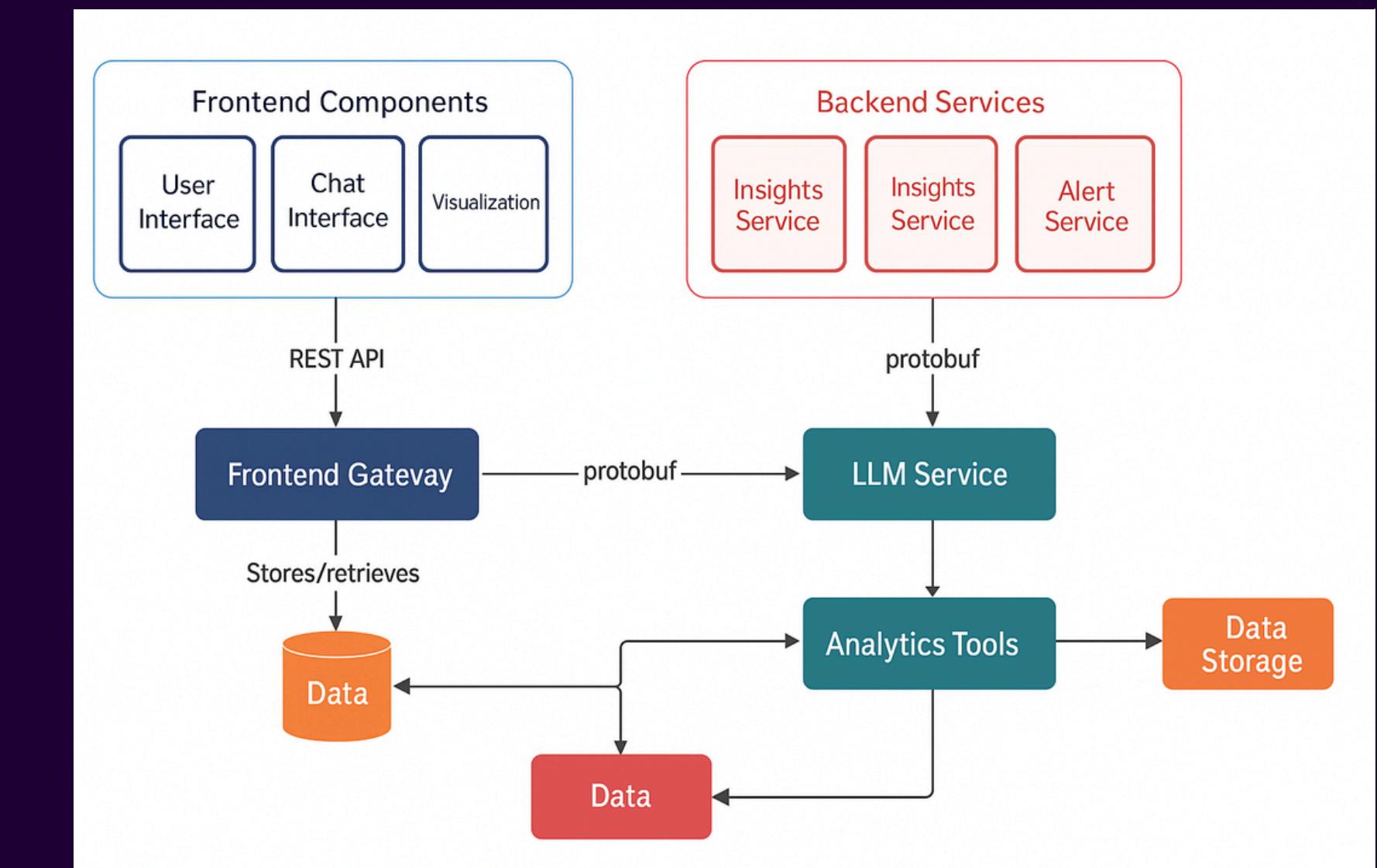
- **Hybrid interface** (Dashboard + Chat) catering to different user preferences.
- **Advanced AI Agent:** Uses LLM + Tools (via LangChain concept) for complex data retrieval and analysis.
- **Built-in multilingual support** for SEA's diverse merchant base.



TECHNICAL EXECUTION & ARCHITECTURE

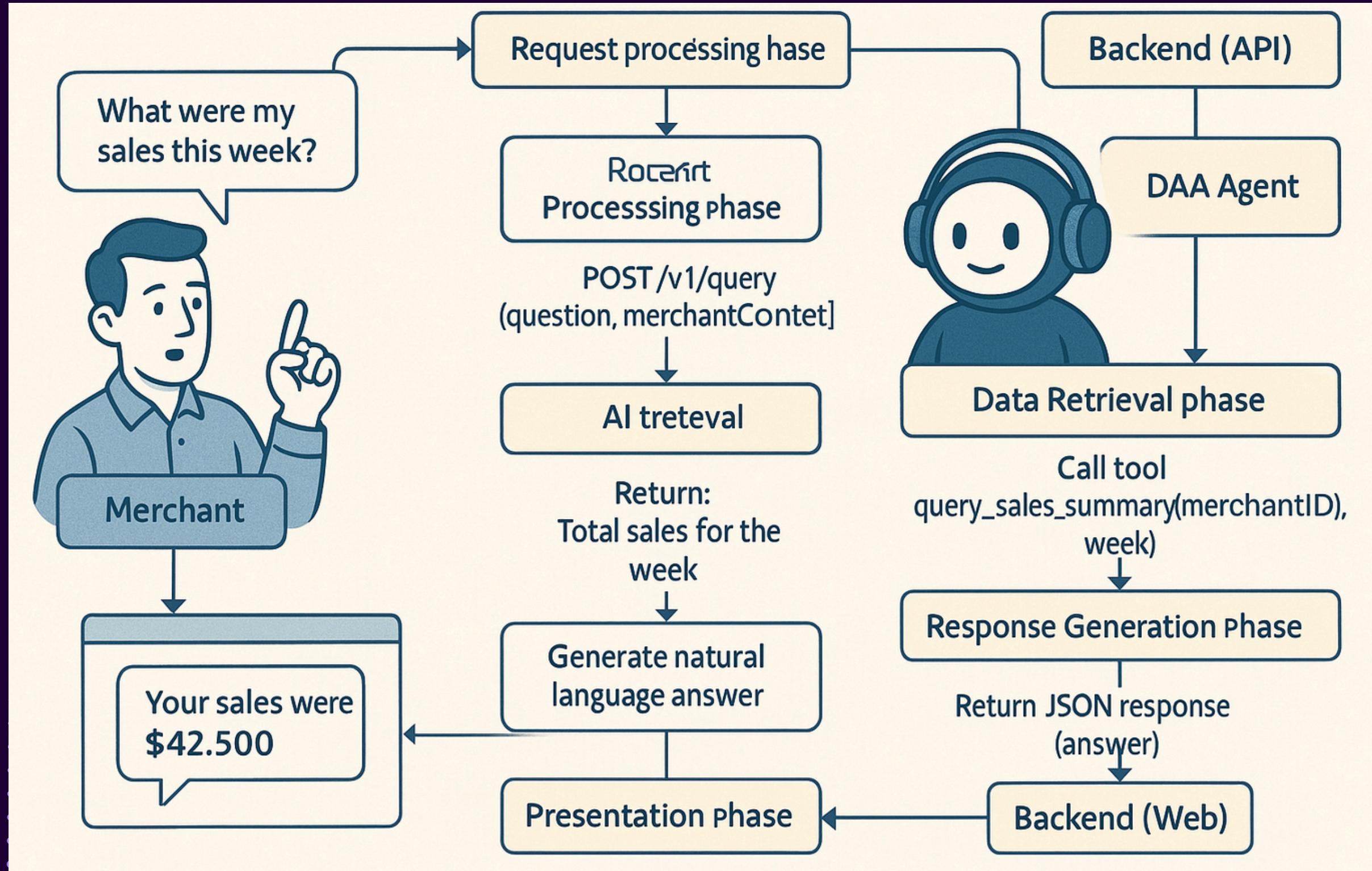


Our project uses a modular, scalable setup with a React+Vite frontend and Python backend. This separation ensures a smooth user experience, with data processing and AI handled server-side.

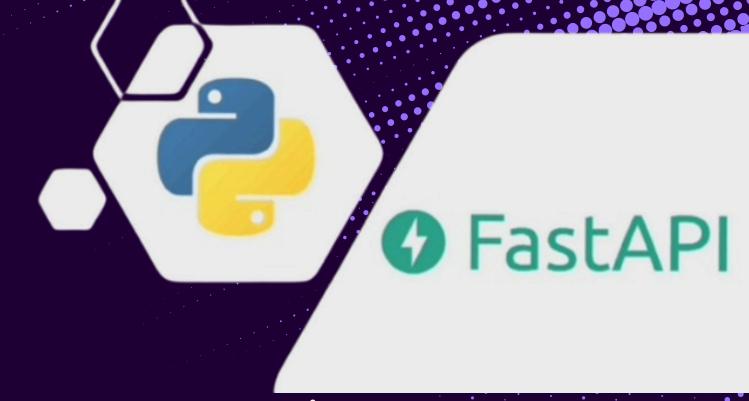


TECHNICAL EXECUTION & ARCHITECTURE

-----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

ETHICAL CONSIDERATIONS IN AI-DRIVEN CYBERSECURITY

The use of AI in cybersecurity raises important ethical considerations, including bias, transparency, and accountability.

01

Privacy Concerns

AI systems may collect and analyze large amounts of data, raising concerns about privacy and data protection.

03

Transparency and Accountability

It is important to ensure that AI-powered security systems are transparent and accountable for their actions.

02

Bias and Discrimination

AI algorithms can be biased, leading to unfair or discriminatory outcomes in cybersecurity decisions.

04

Ethical Decision-Making

Cybersecurity professionals need to be trained to make ethical decisions when using AI-powered tools.

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.

THE FUTURE OF AI IN CYBERSECURITY

AI is expected to play an increasingly important role in cybersecurity, driving innovation and shaping the future of cyber defense.

01

Advanced Threat Detection

AI will continue to evolve, enabling more sophisticated and accurate threat detection capabilities.

02

Automated Incident Response

AI-powered systems will become increasingly autonomous, automating complex incident response processes.

03

Adaptive Security

AI will enable security systems to adapt to evolving threats, becoming more resilient and proactive.

THANK YOU! QUESTIONS & ANSWERS

We appreciate your attention and welcome your questions.

[Watch Our Demo Here](#)

Contact Us:

 Email:

 Phone:

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