UMHackathon 2025

Domain 3 Task 1
DAX Assistant – Handsfree

Prepared by Vegetables

Team Members

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AI-Powered Voice Assistance

Multilingual Support:

- Understands Regional Malay, Malaysian English, Malaysian Chinese, Bahasa Rojak, and more

Zero-Touch Activation:

- Automatically starts via voice prompt
- No complex wake-up steps

Voice Interaction:

- Responds to driver questions via voice outputs
- Support natural conversation while driving

Real-Time Order Updates:

- Provides live updates on order progress
- Minimizes need to look at the screen

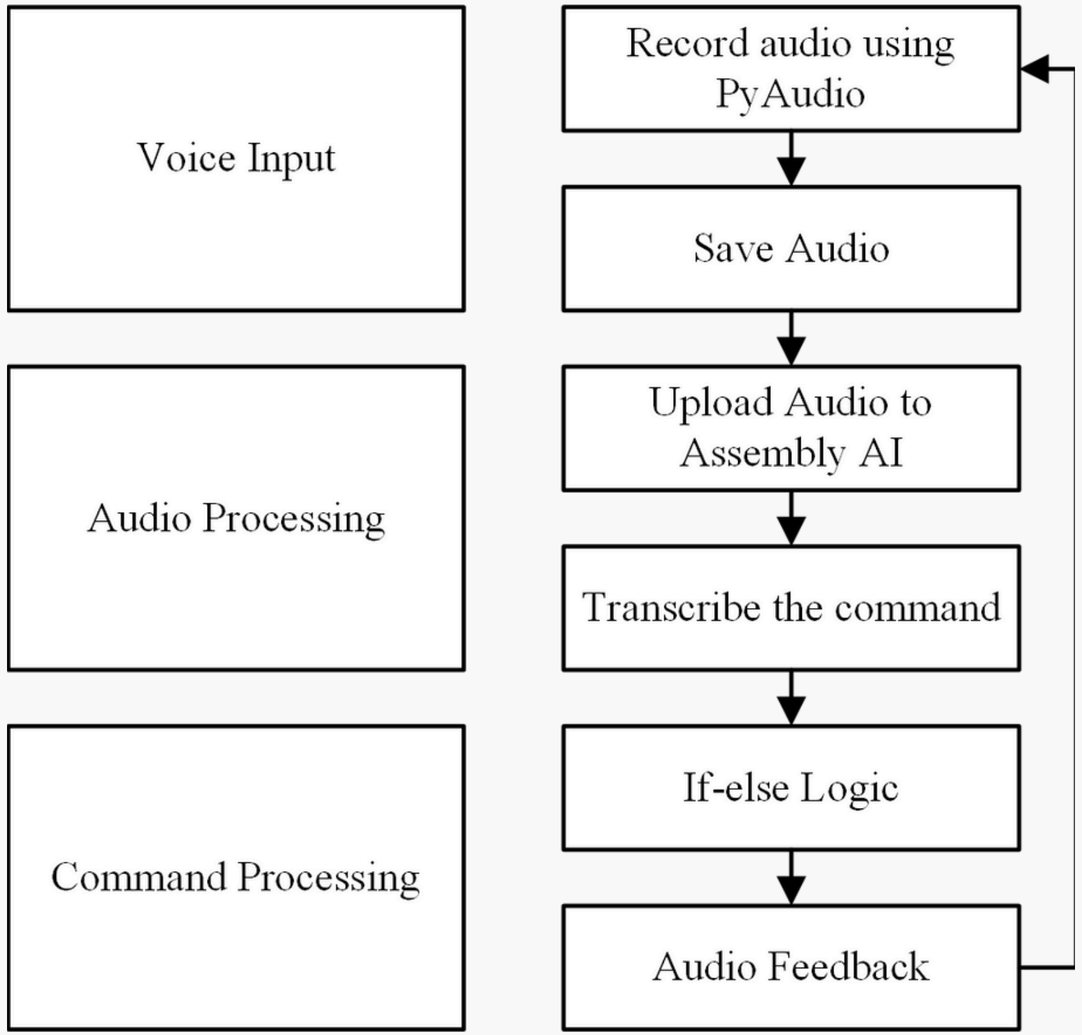
Noise Suppression:

- Filter out ambient noise from audio inputs to isolate speaker's voice
- Generates output with higher accuracy

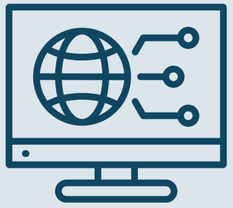
Smart Order Notifications:

- Notifies drivers of new orders
- Accept or decline using voice commands

Architecture



Challenges



Technological Limitations

- Current assistant capabilities may not keep up with rapidly evolving driver needs
- Long-term effectiveness could be impacted as user expectations grow

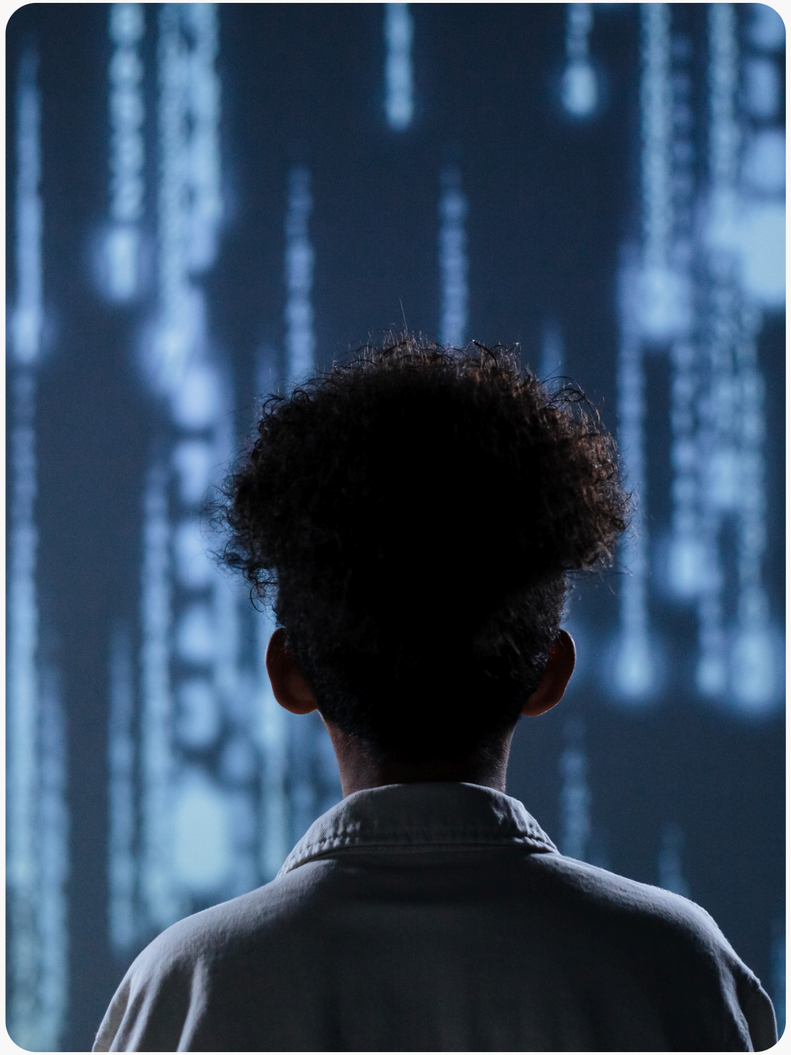
Integration Complexity

- Requires significant effort to integrate seamlessly with existing Grab systems
- Ensuring compatibility and smooth functionality may take time

User Adaptation

- Some drivers may struggle with adopting voice-based systems
- Lack of familiarity with voice commands could hinder usability and acceptance

Future Enhancements



Smarter System:

- Better error handling (API, network, mic issues)
- Continuous background listening
- Natural Language Processing for more commands

Expanded Features:

- More languages & dialects
- Accident detection & emergency alerts
- Personalization for driver preferences

Better Experience:

- Modular design for easy updates
- Beginner-friendly tutorials for faster adoption

Thank you