### UMHackathon 2025

# Domain 3 Task 1 DAX Assistant – Handsfree

Prepared by Vegetables

## Team Members





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### **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 prompts
- Support natural conversation while driving



Voice Assistance



### **Smart Order Notifications:**

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



### **Real-Time Order Updates:**

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



## Architecture

Record audio using PyAudio Voice Input Save Audio Upload Audio to Assembly AI Audio Processing Transcribe the command If-else Logic Command Processing Audio Feedback

# 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**

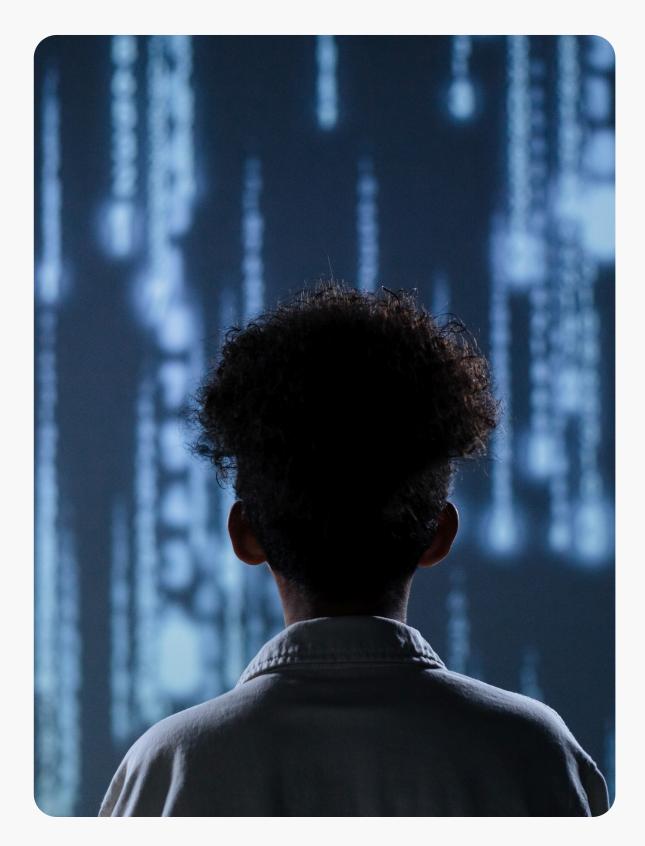
- Requires significant effort to integrate seamlessly with existing Grab systems
- Ensuring compatibility and smooth functionality may take time



### **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