Conversational AI at Scale

Melbourne Diwali's WhatsApp Support Chat

How AI automation handled over 25,000 attendees and 600 performers seamlessly

Agenda

Arush Mittal

Bachelor of Science, Major in Computer Science at The University of Melbourne.

Primary experience in Web/Brand Development, and AI Implementation.


MARVEL STADIUM
EARL

The Problem

Lack of a Unified Attendee Experience

Typically, for a festival of this size, the digital experiences can range from performer dashboards, food stall and vendor information, social media engagement, FAQ lists, contact information for vital services like event security, and event experiences with dynamic data such as user submissions for photo contests and raffle systems.

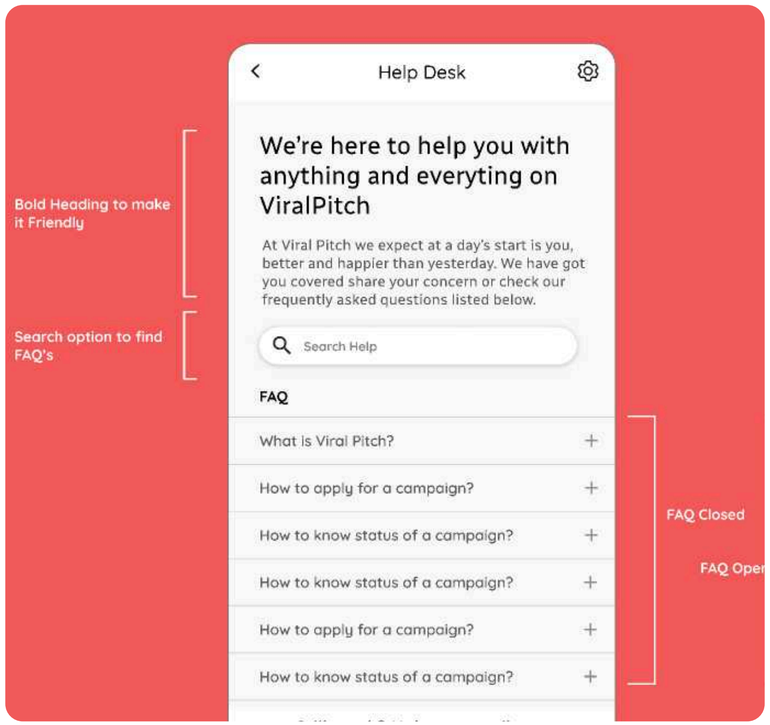
Solution Exploration

IVR Chat System

Wordy and unintuitive

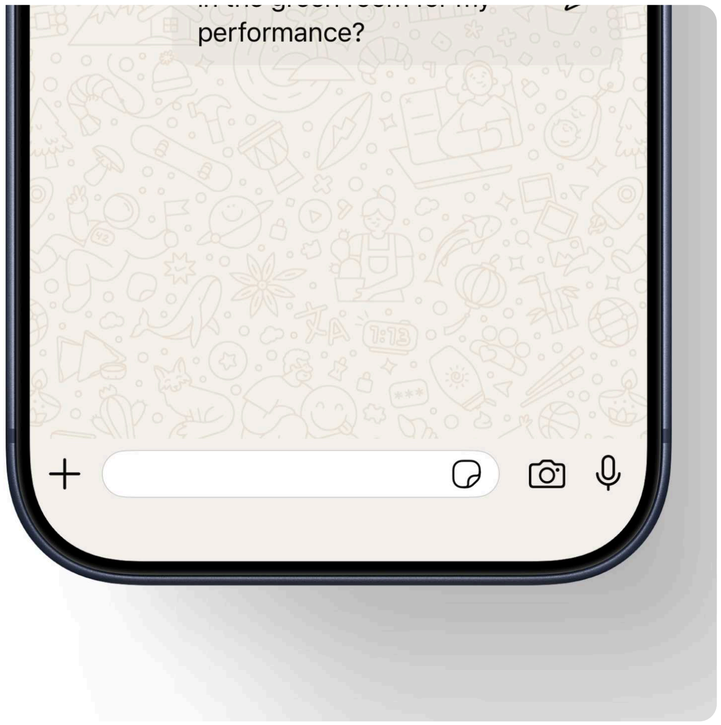
WebApp with FAQ list

Simple, but limited in usability



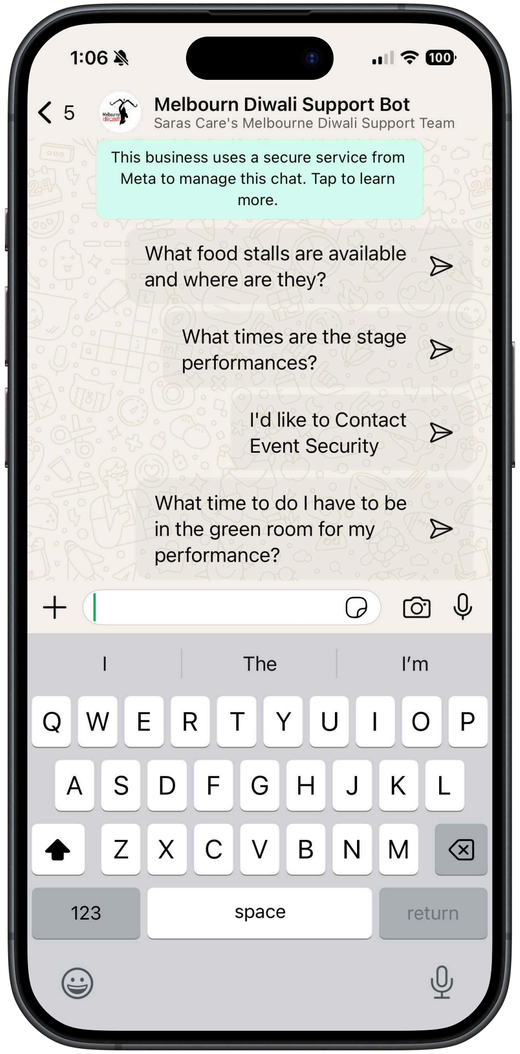
Natural Language Interface

The most ambitious, but intuitive



Why Conversational AI made the most sense

Solution C



Accessibility

It gave us control over training models for multiple languages

Intuitiveness

Allowed each response to be tailored for the query, reducing noise from other FAQs that were irrelevant

Data Capture

Enabled us to understand the behaviour and patterns of users

The WeChat for Melbourne Diwali

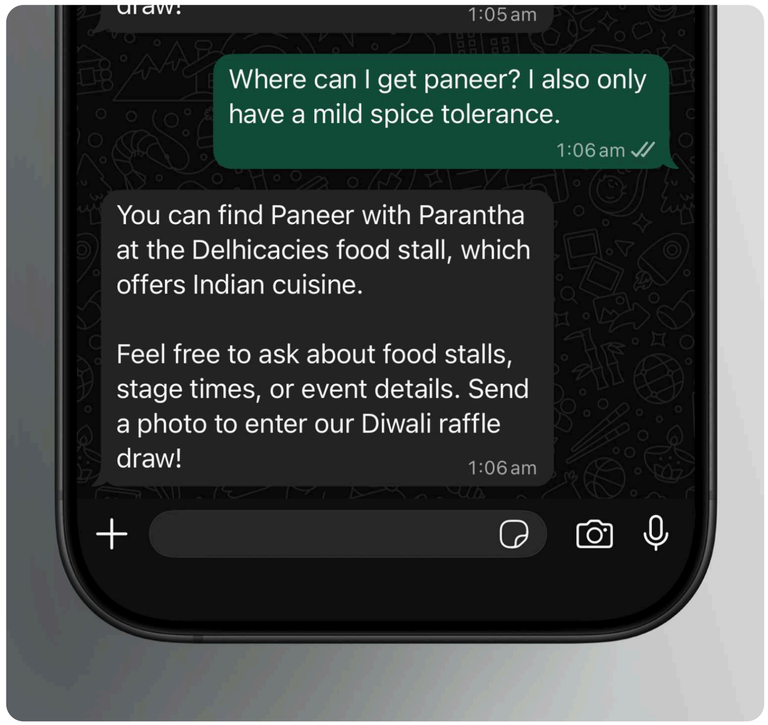
The mentality we brought to Melbourne Diwali was similar to China's concept of the Everything app.

The idea that we could have a unified experience for attendees, performers, event experiences like photo contests, and ultimately a unified experience for our internal data capture as well.

User Intents

Attendee Inquiries

General FAQs and Contact



Performer Inquiries

Performer FAQs and Timings

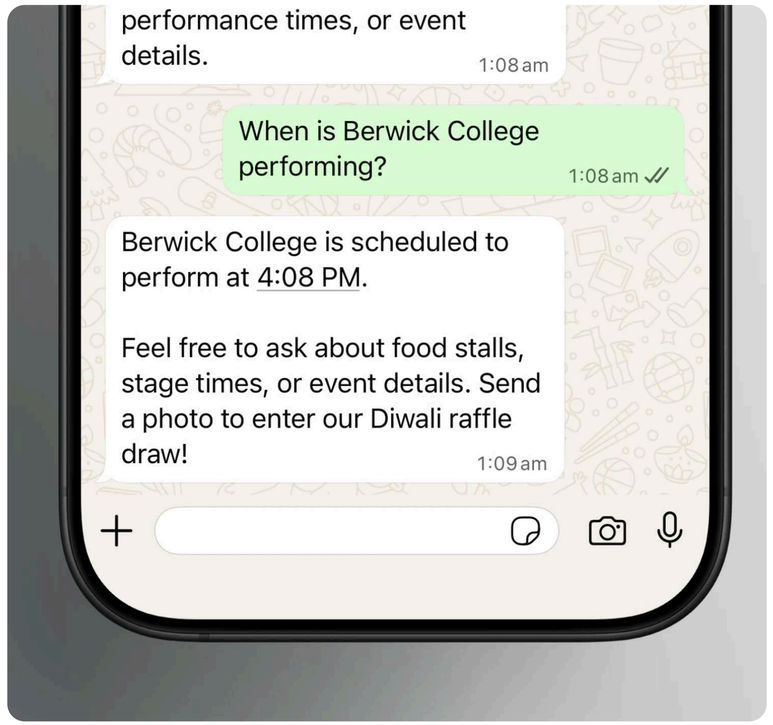
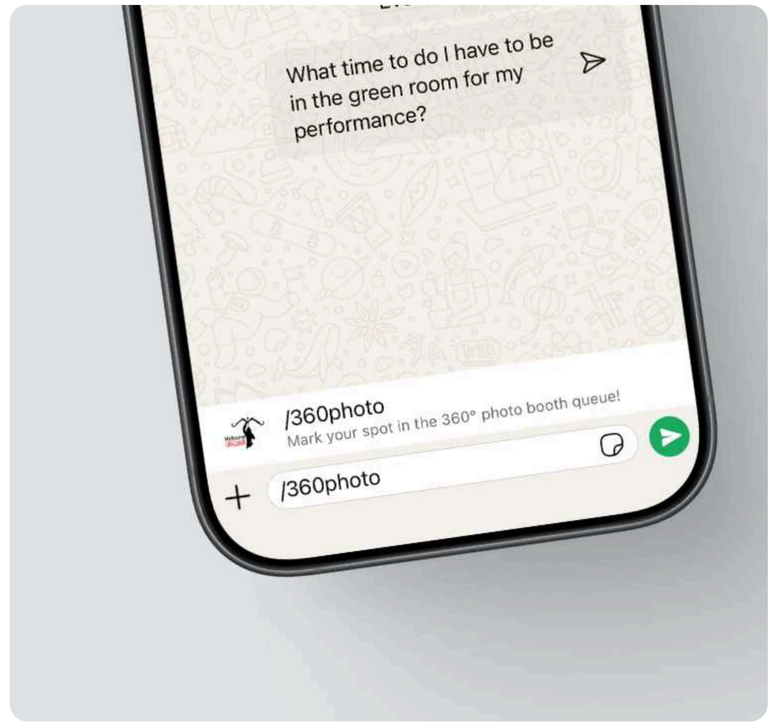


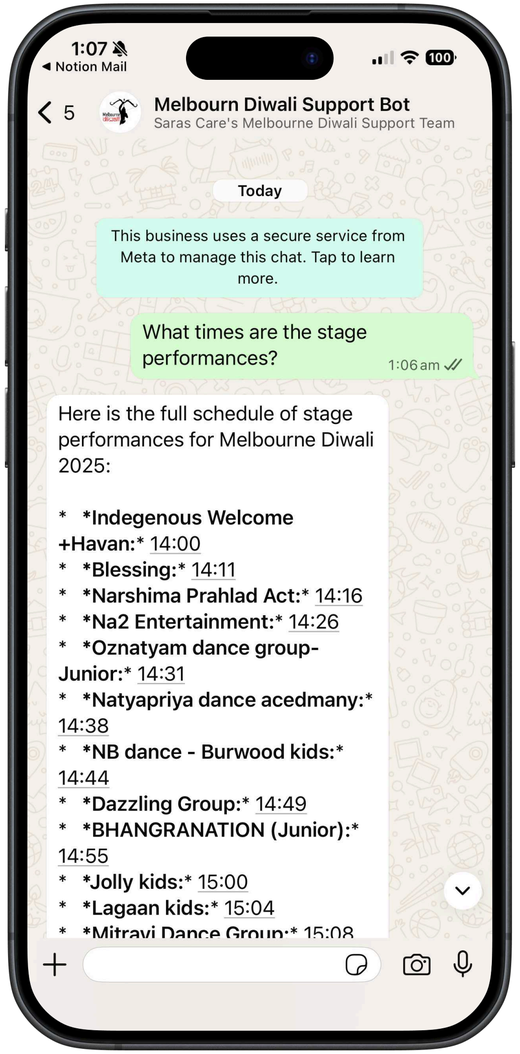
Photo Contest System

Event Experiences - Raffle Contest



Snapshot

Concept for Festival Attendees



Food Stall FAQs

Users asking questions like spice tolerances, and cuisine availabilities

Performance Inquiries

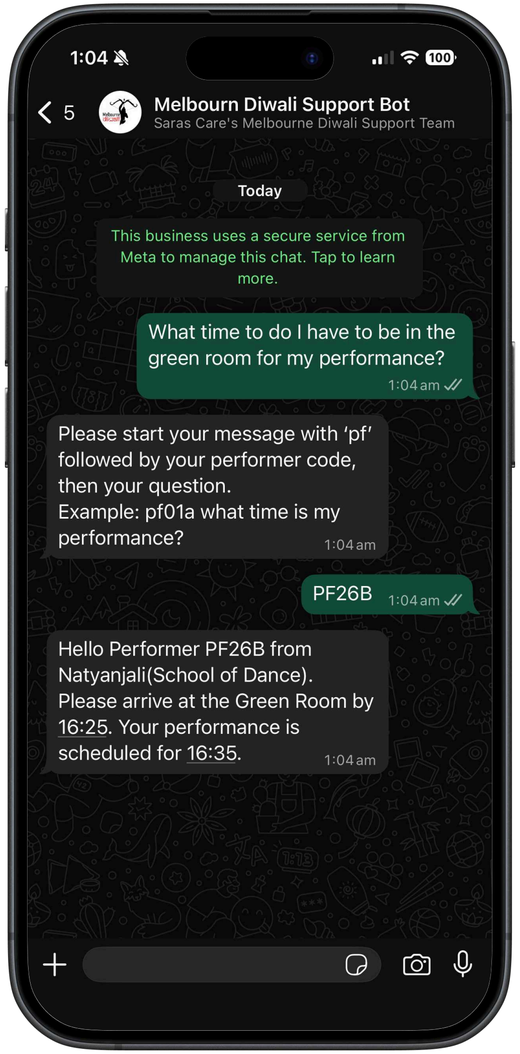
Parents looking to know when their children are performing

Multi-Lingual

Responds in the language spoken to

Snapshot

Concept for Festival Performers



Related FAQs
Green Room Location,
Contact Person

Individual FAQs
Dynamic Individual Performance Timings (including delays)

Multi-Lingual
Responds in the language spoken to

*Yes you can talk to it in any language

Huuuuuungry?
Don’t know what to eat?
Ask our WhatsApp 💬

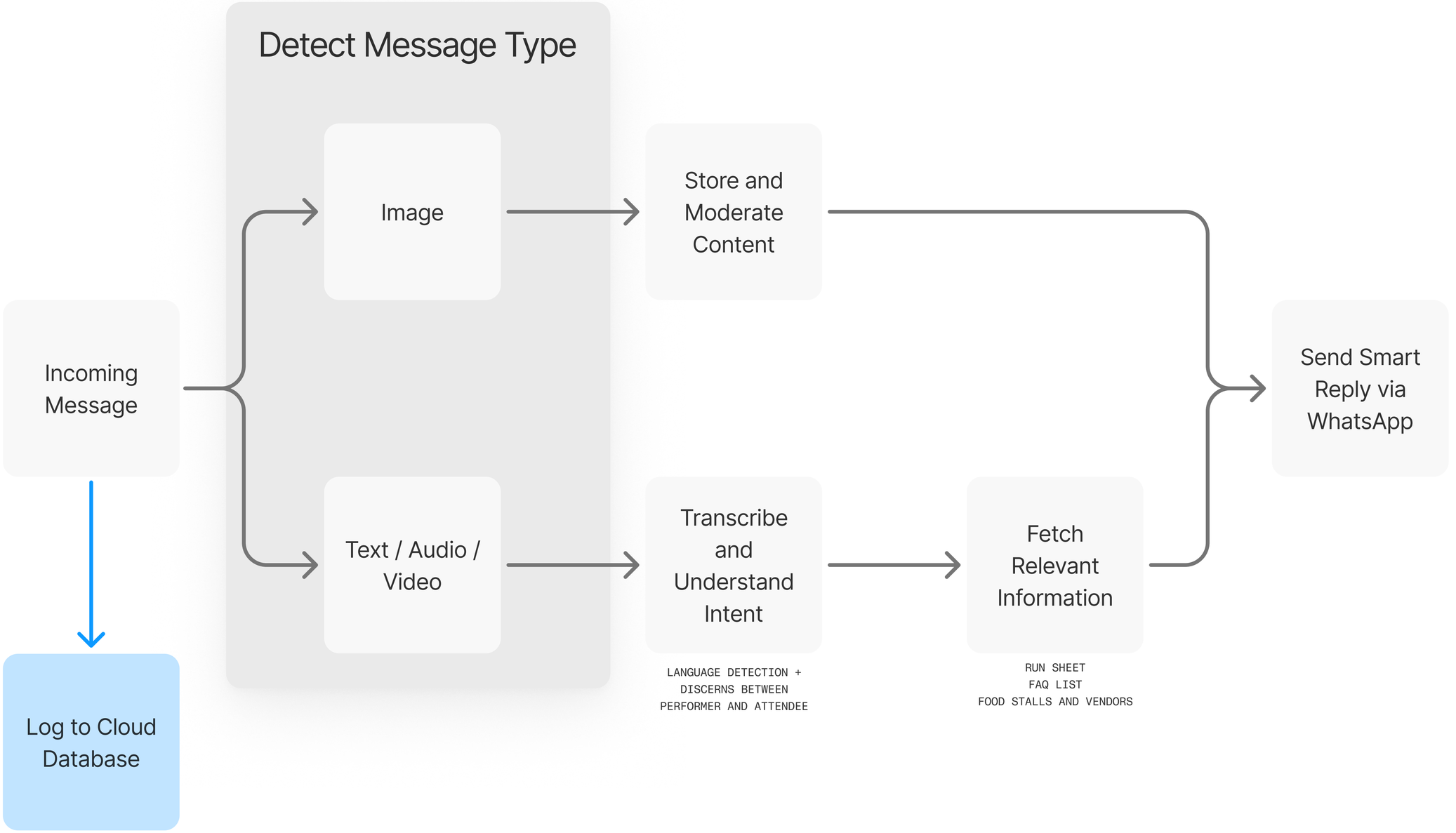
🤤🍛

Where can I get paneer? 13:14 ✓✓

I can’t handle spicy food, what can I eat? 17:09 ✓✓

Lasi kidar milega? 11:15 ✓✓ *

System Architecture


Detect Message Type
Incoming Message
Image
Text / Audio / Video
Store and Moderate Content
Transcribe and Understand Intent
LANGUAGE DETECTION + DISCERNS BETWEEN PERFORMER AND ATTENDEE
Fetch Relevant Information
RUN SHEET
FAQ LIST
FOOD STALLS AND VENDORS
Send Smart Reply via WhatsApp
Log to Cloud Database

AI

Primary text, image and audio inputs are interpreted, processed, and responded by Gemini's multi-modal models, with back-up models in place.

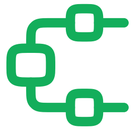


Data Capture

Each user message, name phone number and metadata are captured into a cloud hosted database.


Redundancy

In case of an execution failure, the system notifies the user that they can't complete the request, and an admin receives an error notification and message, which is also dropped into a separate database.



Active Agentic Categorisation

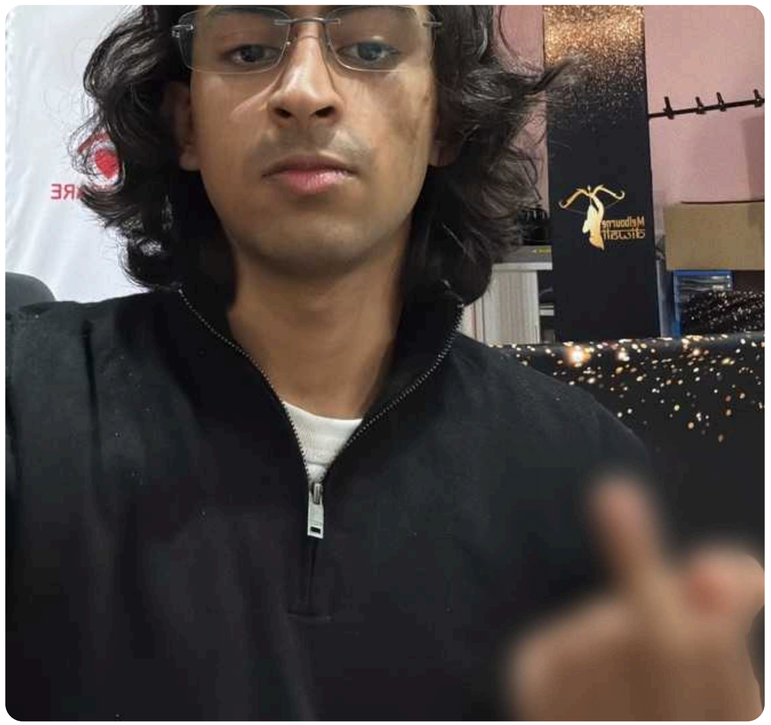
The Raffle System

Appropriate Images

AI Passes Image Contents

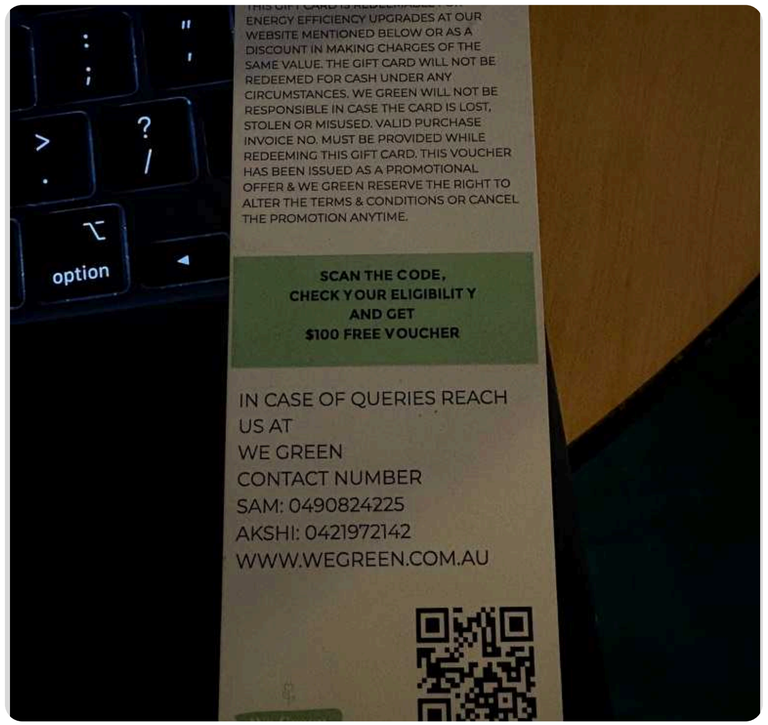
Inappropriate Images

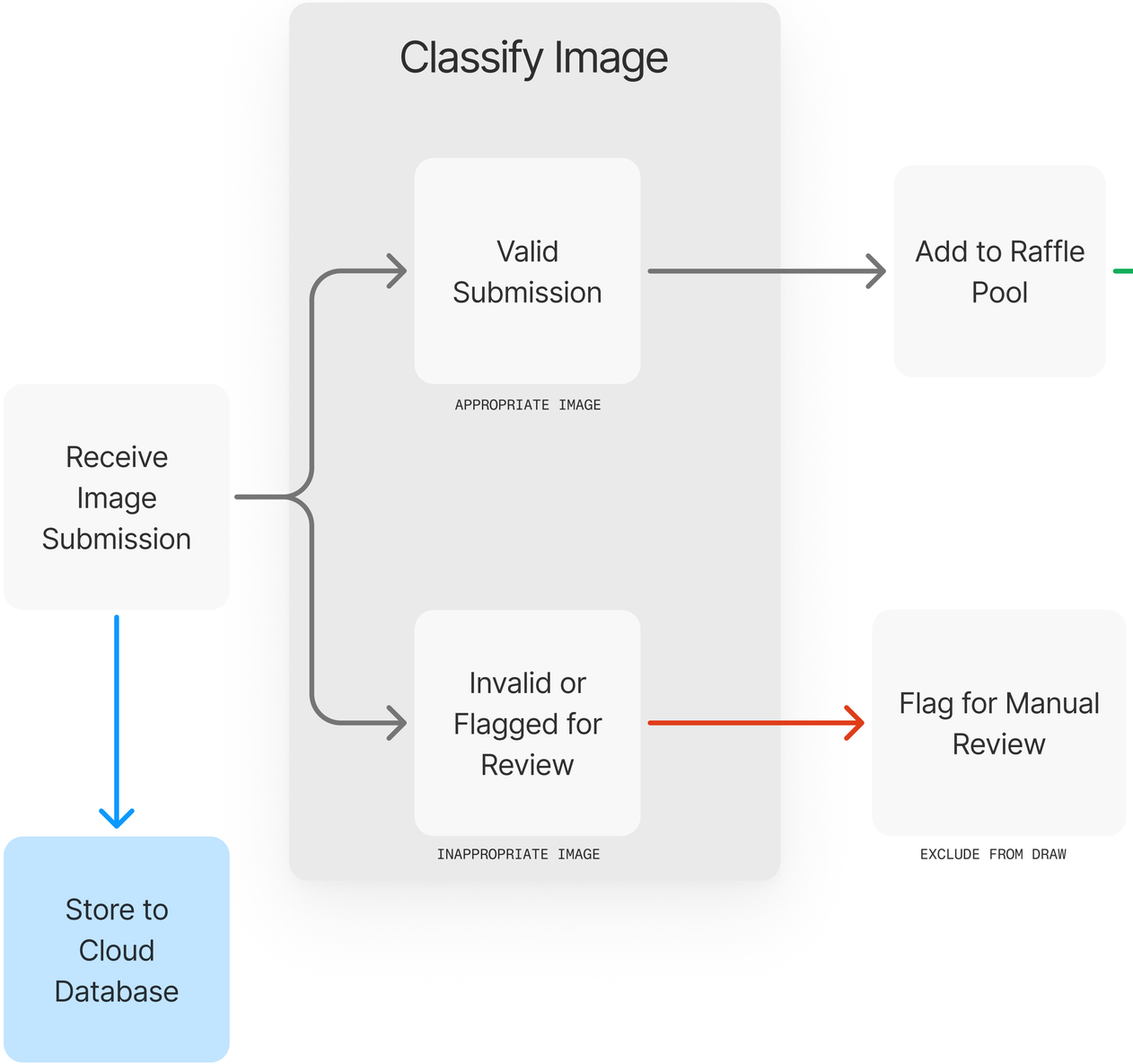
Hate Imagery or Vulgar Symbols



Needs Review

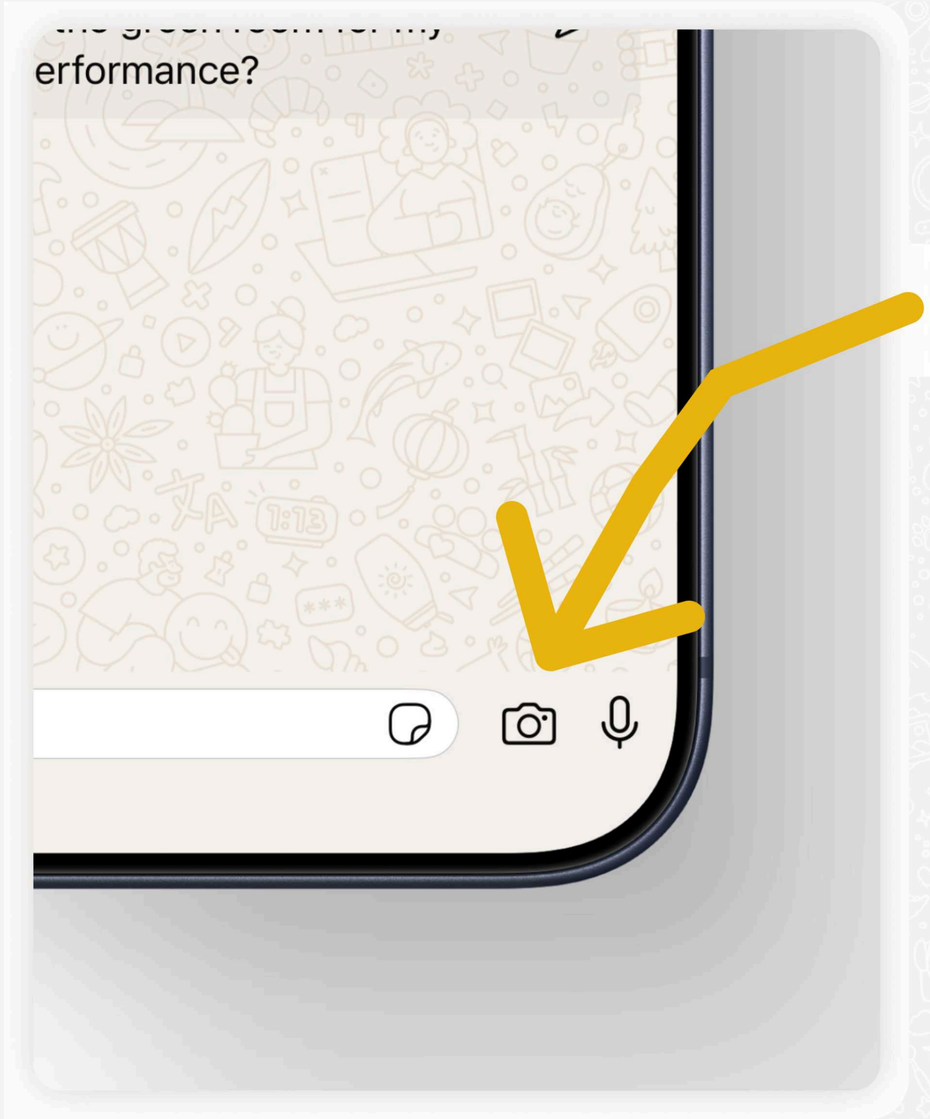
AI is unsure, and plays it safe





Improving event management

Automatically flagging the images saved manual filtering on the day when dealing with large volumes of submissions



Submit your photo for the contest!

PHOTO CONTEST!!

🏆🥇🎉

scan and send to enter 📸

winners every 30 minutes


Aaaaaaand your winner for this Photo Contest Round is...
Arush Mittal
scan and send to enter
winners every 30 minutes

Impact and Metrics

Appropriate Images Submitted

100+

Successful Photo Booth Entries

120+

Errored Executions on Production Day

<10

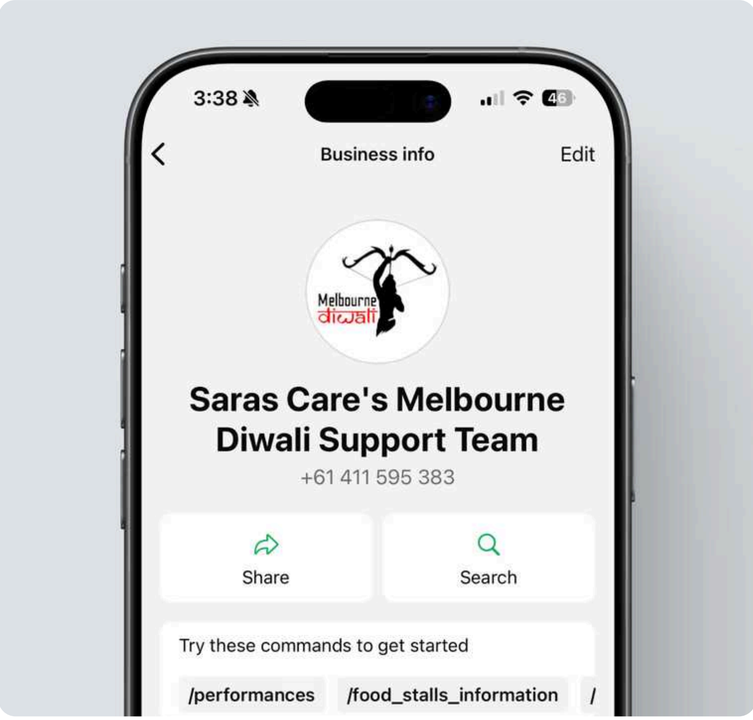
Successful Queries Handled

200+

Beyond Melbourne Diwali

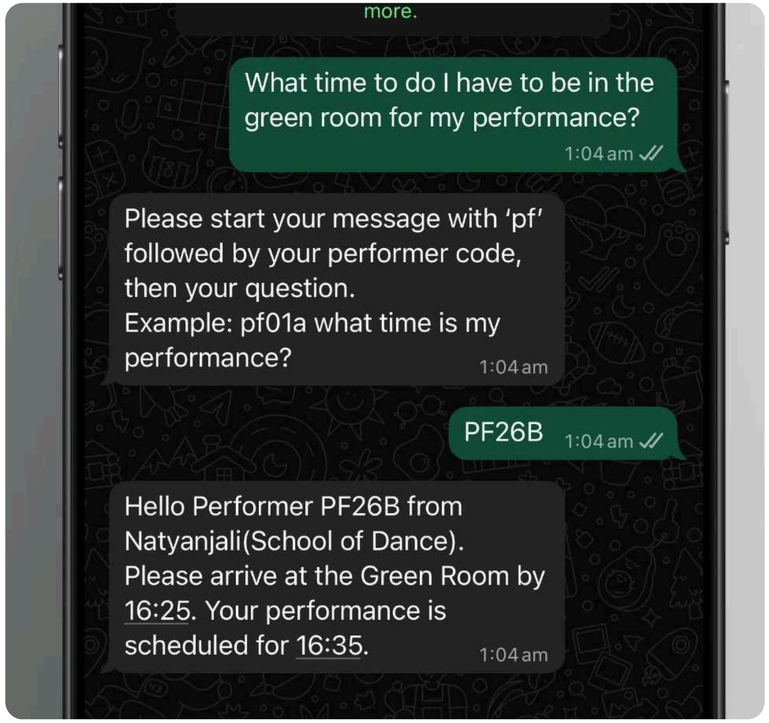
24/7 Internal Inquiry Handler

Handle internal inquiries 24/7



Volunteer Rostering

Sign In and Tracking System



Commerce

Natural Language Purchasing

Data Governance Applications

Data Governance & SOP Automation

Data management plans

Lifecycle automations

Data quality rules

Agentic AI can automate the creation and maintenance of data management plans by interpreting natural language instructions and generating structured templates.

Such as lifecycle policies (archival, deletion, retention) and data quality checks.

Example for NDIS: Automatically generate lifecycle policies for participant data or compliance reports, ensuring sensitive data is retired according to NDIS regulations.

Policy-Aware SOP Generation & Validation

When internal teams create SOPs or reports, the AI validates entries against NDIS, privacy, and internal governance frameworks - warning if procedures violate compliance standards.

Example for NDIS: When drafting an SOP for incident handling, the system alerts users if steps contradict mandatory safeguarding procedures.

Policy Cross-checking

Governance Rules

Error Reduction

Assisted Compliance & Policy Intelligence

Policy Citations

Bylaw Cross-References

Human Error Prevention

The agent can cite exact policy references while generating content and flag deviations in real time. It can also summarise or answer policy-related questions conversationally.

Example for NDIS: “Generate a safeguarding checklist based on NDIS Quality and Safeguards guidelines,” with inline citations to the relevant clause numbers.

NDIS Demonstration — October 2025

Demo and Q&A

Arush Mittal

mail: arush.vmittal@gmail.com

site: argonix.net

linkedin: arushm