

PROJECT BUILD REPORT

Apex Home Service Agency

AI-Powered Booking Chatbot & Operations Dashboard

Build Timeline

Under 6 Days

Core Components

AI Chatbot + Admin & Worker Dashboard

Architecture

Modular Sub-Workflow System

Document Type

Client / Recruiter Overview

1. Project Overview

Apex Home Service Agency is a complete service-business automation system built around two connected products: an **AI booking & support chatbot** that manages the entire customer journey, and a **two-part operations dashboard** that gives business owners full visibility into performance and gives field workers a simple daily self-service portal. The system was designed to remove manual coordination work — no more phone-tag for bookings, no more spreadsheets for tracking workers, no more manual reconciliation of revenue and attendance.

In short: the chatbot handles the customer side end-to-end, the admin dashboard handles the business side end-to-end, and the worker dashboard handles the field-team side end-to-end. All three stay in sync automatically.

4 Key Highlights

01 End-to-End AI Automation Handles inquiries, complaints, availability checks, bookings, rescheduling, cancellations, reminders, and confirmation emails without human involvement.	02 Real-Time Business Intelligence Admin dashboard tracks revenue, bookings, cancellations, and worker activity with month-over-month comparisons and automated reporting.
03 Modular, Fail-Safe Architecture Built on isolated sub-workflows — if one process breaks (e.g. reminders), the rest of the system keeps running while it's fixed.	04 Built in Under 6 Days Full chatbot + dual dashboard system designed, built, and made deployment-ready in less than a week.

2. Full Project Description

The system is composed of three connected surfaces — the **AI Chatbot**, the **Admin/Owner Dashboard**, and the **Worker Dashboard** — all reading from and writing to the same shared booking, scheduling, and financial data. This means a booking made through the chatbot instantly appears on the admin's analytics and on the assigned worker's schedule, with zero manual re-entry anywhere in the pipeline.

2.1 AI Chatbot — Full Function List

Function	What It Does
Query Handling	Answers general customer questions about services, pricing, and process in natural conversation.
Complaint Registration	Logs customer complaints directly into the system with all relevant details, routed to the admin panel.
Availability Check	Checks real-time worker availability for a requested date and time slot before confirming anything.
Smart Alternative Suggestions	If the requested slot is unavailable, automatically suggests alternative available workers or nearby time slots.
Booking	Books the appointment once a slot and worker are confirmed, and creates the record across all systems.
Rescheduling	Lets customers move an existing booking to a new date/time, re-checking availability automatically.
Cancellations	Processes cancellations and updates worker schedules and admin analytics instantly.
Automated Reminders	Sends reminders ahead of scheduled appointments to reduce no-shows.
Email Confirmations	Sends a confirmation email automatically after every successful booking, reschedule, or cancellation.

2.2 Admin / Owner Dashboard — Full Function List

Function	What It Does
Worker Monitoring	Tracks how often each worker is booked, their utilization, and workload distribution.
Revenue Tracking	Displays total revenue generated across all bookings in real time.
Reschedule & Cancellation Metrics	Shows counts and trends for rescheduled and cancelled bookings to flag reliability issues.
Advanced Analytics	Visual breakdowns of business performance across services, workers, and time periods.
Monthly Revenue Comparison	Compares current month's revenue against previous months to track growth or decline.
Finance Split (50/50)	Automatically calculates and divides finances (e.g. company vs. worker share) per completed job.
Automated Monthly Reports	Generates a consolidated monthly report of revenue, bookings, and worker performance.
Centralized Control Panel	Every metric, report, and control lives in a single unified dashboard — no external spreadsheets needed.

2.3 Worker Dashboard — Full Function List

Function	What It Does
QR Code Attendance	Workers scan a QR code daily at login to automatically mark themselves present for the day.
Daily & Weekly Schedule View	Shows each worker their jobs for today, followed by their full week's schedule.
Task Completion Marking	Workers mark jobs as completed once finished; this updates their total completed task count automatically.
Hourly Earnings Tracking	For hourly-rate workers, the dashboard displays hours worked and money earned in real time.

2.4 Sub-Workflow Architecture

Instead of building one large, monolithic automation, the system is broken into small, independent **sub-workflows** — each responsible for exactly one job (e.g. "check availability," "send confirmation email," "mark attendance," "generate monthly report").

1 **Inquiry & Complaint Workflow** — handles general queries and complaint logging independently of booking logic.

2 **Availability & Suggestion Workflow** — checks worker calendars and generates alternatives when needed.

3 **Booking Workflow** — creates, validates, and stores new appointments.

4 **Reschedule / Cancellation Workflow** — updates existing bookings and syncs changes system-wide.

5 **Notification Workflow** — sends reminders and confirmation emails on a separate trigger.

6 **Attendance Workflow** — processes daily QR check-ins for workers.

7 **Task Completion Workflow** — updates task counts and hourly earnings when a job is marked done.

Why sub-workflows? Each workflow runs and fails independently. If the reminder-notification workflow breaks, bookings, cancellations, attendance, and revenue tracking all keep working normally — only the reminders need fixing. This makes the system far easier to debug, maintain, and scale, since a single point of failure can never take down the whole platform.

3. Dashboard Breakdown

3.1 Admin / Owner Panel

This is the business command center. Owners get a single-screen view of how the business is performing — booking volume, worker utilization, revenue, and job outcomes — without needing to check multiple tools or manually compile numbers.

- Live worker booking counts and utilization rates
- Total revenue, updated as jobs are completed
- Cancellation and reschedule rates, to catch reliability issues early
- Month-over-month revenue comparison charts
- Automatic 50/50 (or configurable) financial split calculations
- One-click monthly performance reports

3.2 Worker Panel

This is the field-team's daily tool. It replaces manual sign-in sheets, paper schedules, and end-of-week earnings calculations with one simple login flow.

- QR code scan-in each day to mark attendance
- Personal schedule: today's jobs, then the week ahead
- Mark jobs complete, which feeds directly into their performance stats
- Live hours-worked and earnings tracker for hourly-rate workers

Because both panels read from the same underlying data as the chatbot, there is no lag or manual sync between what a customer books, what a worker sees on their schedule, and what the owner sees in their revenue reports.

4. Technical Details

This section is separated from the functional overview above and is intended for technical evaluators.

4.1 System Components

Layer	Responsibility
Conversational AI Layer	Natural language understanding for queries, complaints, and booking intent parsing
Scheduling Engine	Real-time availability checks, conflict detection, alternative-slot logic
Notification Layer	Email confirmations and reminder dispatch, decoupled from core booking logic
Admin Analytics Layer	Aggregation, revenue calculation, monthly report generation
Worker Portal Layer	QR-based attendance, task tracking, earnings calculation
Shared Data Layer	Single source of truth connecting chatbot, admin panel, and worker panel

4.2 Design Principles

- **Isolation of concerns** — every sub-workflow does one job only, making failures easy to trace
- **Single source of truth** — all three surfaces (chatbot, admin, worker) read/write the same data
- **Automation-first** — reminders, confirmations, and reports run on triggers, not manual action
- **Fast iteration** — modular structure allowed the entire build to ship in under 6 days

4.3 Build Timeline

Total build time: under 6 days — covering chatbot logic and conversation flows, the full sub-workflow automation layer, the admin analytics dashboard, and the worker attendance/task portal.