



Employee Culture Intelligence

An **AI-powered SaaS platform** that turns anonymous employee pulse surveys into actionable leadership insights — delivered via **Email, Slack, WhatsApp & SMS**.

React + Node.js + Express

Frontend & Backend

Stripe + Clerk

Billing & Auth

MongoDB + OpenAI API

Database & AI Layer

Twilio · Slack · Email

Multi-Channel Delivery

Built Solo · Founder & Engineer · Final QA Phase

Muhammad Mustafa · Senior Full-Stack Engineer · 10+ Years Experience

OVERVIEW

What is CultureAI?

Most companies run annual employee engagement surveys and get a spreadsheet back. By the time leadership reads it, the problems are already compounding. CultureAI was built to fix that.

CultureAI is a real-time employee culture intelligence platform that sends lightweight anonymous pulse surveys to employees via Email, Slack, WhatsApp, or SMS. Responses are aggregated instantly, and OpenAI generates actionable leadership summaries, identifies key concerns, and surfaces culture health trends — all on a single dashboard.

■ THE PROBLEM

HR teams rely on annual surveys that arrive too late to prevent attrition, burnout, and disengagement. Leaders have no real-time visibility into trust, morale, or team sentiment. Survey responses are scattered, manually analyzed, and rarely lead to concrete action.

✓ THE SOLUTION

CultureAI delivers continuous anonymous pulse surveys with automated multi-channel delivery. OpenAI analyzes responses and generates weekly leadership action plans. Leaders see live health scores across Trust, Burnout Risk, Engagement, and Loyalty — with AI-driven recommendations to act on immediately.

KEY METRICS & SCOPE

5

Culture Metrics Tracked

3

AI Billing Plans

4

Delivery Channels

100%

Anonymous Responses

∞

Pulse Runs Supported

TECHNOLOGY

Full Tech Stack & Architecture

Frontend	■ React ■ TailwindCSS ■ React Router ■ Context API ■ Recharts ■ Responsive Design
Backend	■ Node.js ■ Express.js ■ REST API ■ JWT Auth ■ Middleware ■ Webhooks
Database	■ MongoDB ■ Mongoose ODM ■ Aggregation Pipelines ■ Indexing ■ Schema Design
AI Layer	■ OpenAI API ■ GPT-4 ■ Prompt Engineering ■ JSON Structured Output ■ Weekly Summaries
Auth & Billing	■ Clerk ■ Role-Based Access ■ Stripe ■ Subscription Plans ■ Billing Webhooks
Delivery	■ Twilio SMS ■ Twilio WhatsApp ■ Slack API ■ Nodemailer ■ Gmail OAuth
Infrastructure	■ Vercel / Render ■ Environment Config ■ CI/CD ■ API Rate Limiting ■ Error Logging

ARCHITECTURE HIGHLIGHTS

◆ Multi-Tenant SaaS	Each workspace is isolated — company profile, branding, survey templates, and audience are fully separate. Built for scale from day one.
◆ Async Survey Delivery	Survey runs dispatched asynchronously via Twilio, Slack API, and Gmail OAuth. Delivery status tracked per recipient per channel.
◆ OpenAI Integration	Raw response data fed into structured GPT-4 prompts. Returns JSON-formatted summaries, action recommendations, and concern analysis.
◆ Stripe Metered Billing	Free / Growth / Enterprise plans with Stripe Checkout and webhook-based subscription lifecycle. AI features are plan-gated.
◆ Anonymous Privacy Layer	Responses stored without linking back to individuals. Architecturally designed so leaders cannot identify respondents.

FEATURE SHOWCASE

Analytics Dashboard

The leadership dashboard provides a real-time overview of culture health signals. Scores across **Trust**, **Burnout Risk**, **Engagement**, **Loyalty**, and **Career Growth** are tracked weekly. OpenAI-generated summaries surface key concerns and what's working well — with a premium AI Summary widget converting raw pulse data into a weekly action plan.

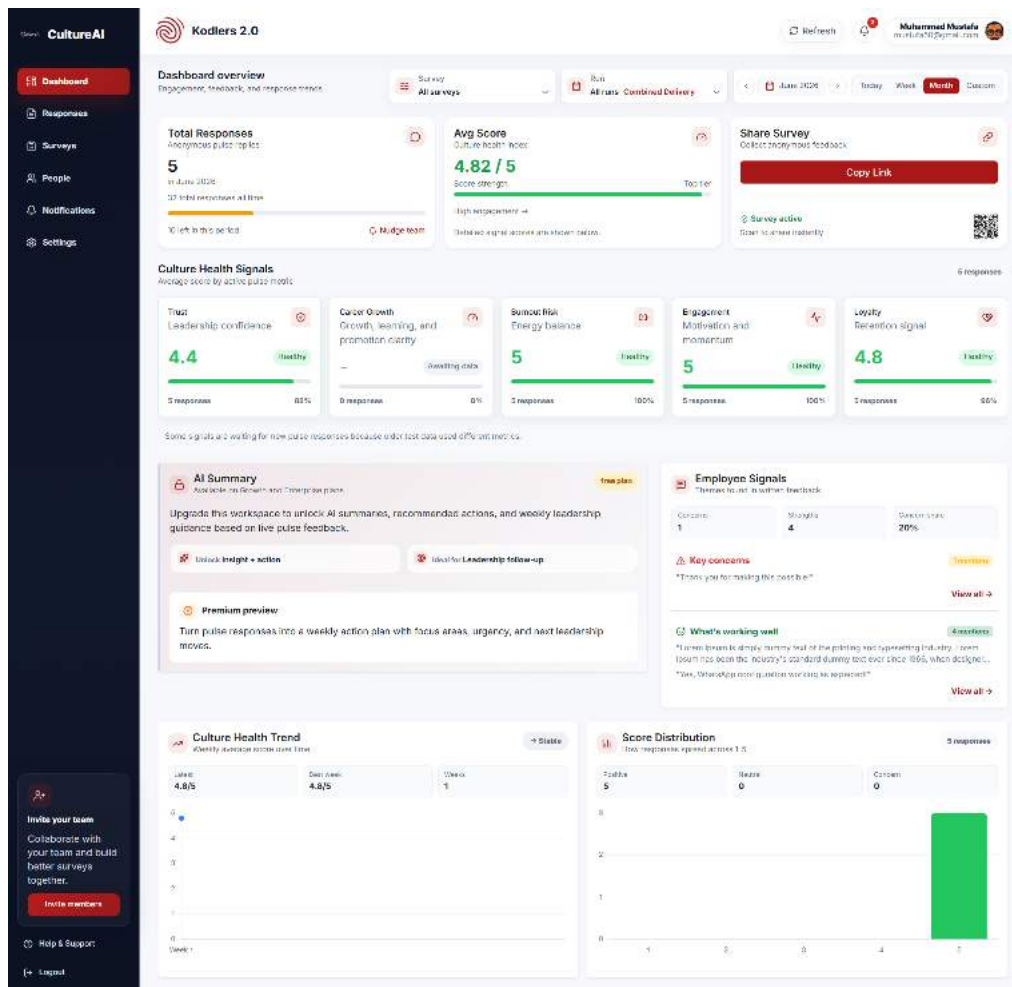


Fig 1 — Culture Health Dashboard: Real-time signals, AI Summary, Score Distribution, and Weekly Trend

FEATURE SHOWCASE

Response Analysis

The Responses module categorises every submission as **Positive**, **Neutral**, or **Negative** based on aggregate signal scores. Each card shows all metric scores at a glance plus open-ended feedback. Low-score responses are automatically flagged for leadership attention. Filters allow drilling by sentiment, survey, and run.

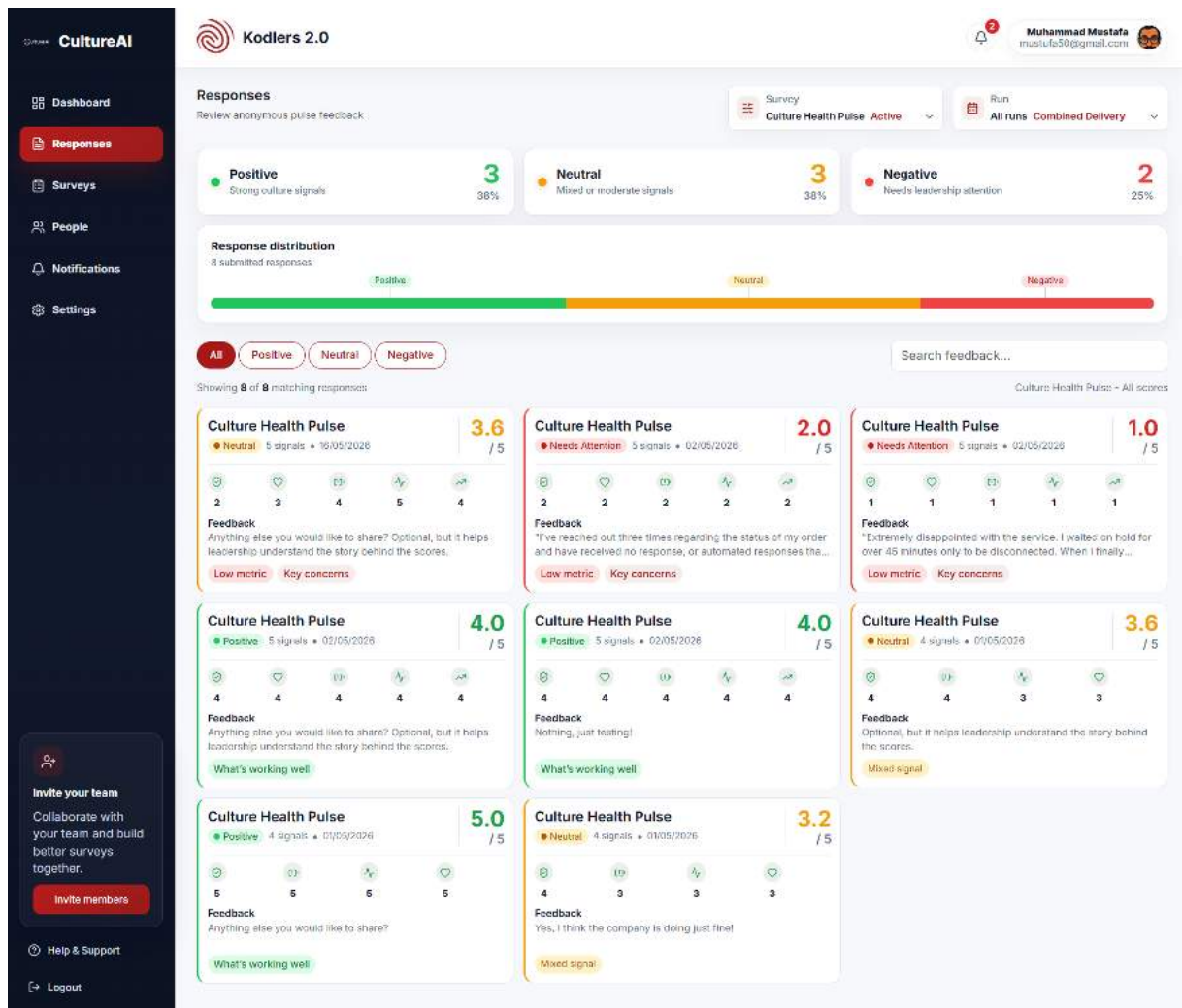


Fig 2 — Responses Module: Sentiment distribution, score cards, feedback themes, and filtering

FEATURE SHOWCASE

Survey Management

Admins create custom survey templates, configure tracked metrics, schedule runs, and manage delivery channels per run. Each survey shows live statistics including response count, awaiting count, and last delivery channel used.

The screenshot displays the 'Surveys' module in the CultureAI interface. The left sidebar contains navigation links: Dashboard, Responses, Surveys (active), People, Notifications, and Settings. The main content area is titled 'Kodlers 2.0' and 'Surveys'. It features a summary section with '2 Total surveys', 'Testing culture app' (Active survey), and '16 Total pulse runs'. Below this, two survey templates are shown: 'Testing culture app' and 'Culture Health Pulse'. Each template displays its status (Active), description, and statistics (questions, metrics, runs). The 'Testing culture app' template has 6 questions, 5 metrics, and 14 runs. The 'Culture Health Pulse' template has 8 questions, 6 metrics, and 2 runs. Below the templates, there are sections for 'Recent runs' and 'Launch run'. The 'Recent runs' section shows two runs for 'Testing culture app' and two runs for 'Culture Health Pulse'. Each run entry includes the number of targeted users, the number of responses, the date and time, and buttons for 'Copy link', 'View', 'Pause', and 'Close'. The 'Launch run' section shows a button to launch a new run. At the bottom, there is a table with columns for 'Latest run', 'Responses', 'Awaiting', and 'Channels'. The table shows the latest run for 'Testing culture app' with 1 response, 0 awaiting, and the channel 'Email'. The latest run for 'Culture Health Pulse' has 0 responses, 0 awaiting, and the channel 'link'. The interface also includes a 'Help & Support' link and a 'Logout' button.

Fig 3 — Surveys Module: Template management, active runs, per-channel delivery status

FEATURE SHOWCASE

People & Audience Management

The People module manages the survey audience. Recipients can be added manually or via CSV bulk import. Each person has a department, role, location, tags, and preferred delivery channel. **Segment filters** allow targeting specific groups per run. Audience status (Active / Inactive) controls who receives the next pulse.

The screenshot displays the 'People' module in the CultureAI interface. The top section shows summary statistics: 4 Total recipients, 4 Active audience, 4 Ready for email, and 0 Inactive. Below this are two main sections: 'Add a person' and 'Import audience'. The 'Add a person' section includes form fields for Name, Email, Phone, Department, Role, Location, Tags, and Preferred channel. The 'Import audience' section includes a CSV upload button and a download template button. Below these is the 'Audience list' section, which shows a table of people with columns for Name, Department, Role, Location, Channel, and Status. The table includes filters for Segment filters, Status, Department, Role, Location, and Channel. The table lists four people: Aysha Khan, Sara Noor, Tuba Ahmed, and Mustafa Kodiera. Each person has a status (Active) and a date (Jan 2, 2023). The interface also includes a sidebar with navigation links and a bottom section for 'Invite your team'.

Name	Department	Role	Location	Channel	Status	Date
Aysha Khan	Operations	Support Lead	Karachi	WhatsApp	Active	Jan 2, 2023
Sara Noor	People Ops	Manager	Lahore	WhatsApp	Active	Jan 2, 2023
Tuba Ahmed	Software Development	Lead	Karachi	WhatsApp	Active	Jan 2, 2023
Mustafa Kodiera	Software Development	Lead	Karachi	WhatsApp	Active	Jan 2, 2023

Fig 4 — People Module: Audience management, CSV import, segment filters, multi-channel delivery indicators

FEATURE SHOWCASE

Workspace Settings

The Settings page is the control centre for each workspace. It covers company profile, custom branding (logo, brand colours), survey delivery configuration, Stripe billing, and AI feature access. **Multi-channel delivery** is configured here — Email (Gmail OAuth), Slack (workspace OAuth), WhatsApp (Twilio), and SMS.

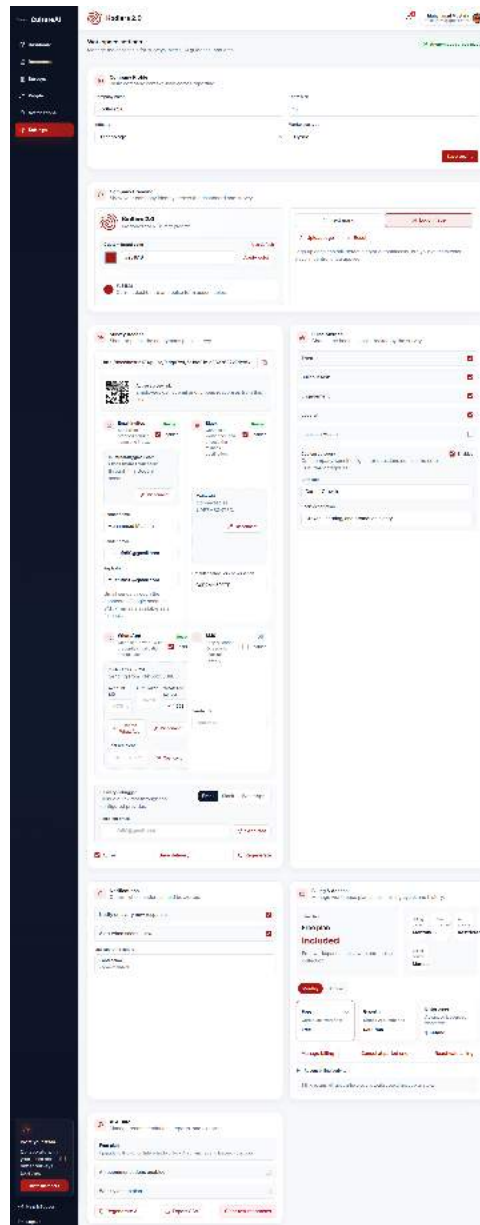


Fig 5 — Settings Module: Company branding, delivery channels, billing plans, AI data controls

FEATURE SHOWCASE

Real-Time Notifications

Leaders receive instant alerts when new responses arrive. Low-score responses trigger priority alerts. The notifications feed shows scores and feedback previews inline, enabling fast triage without needing to open each response manually.

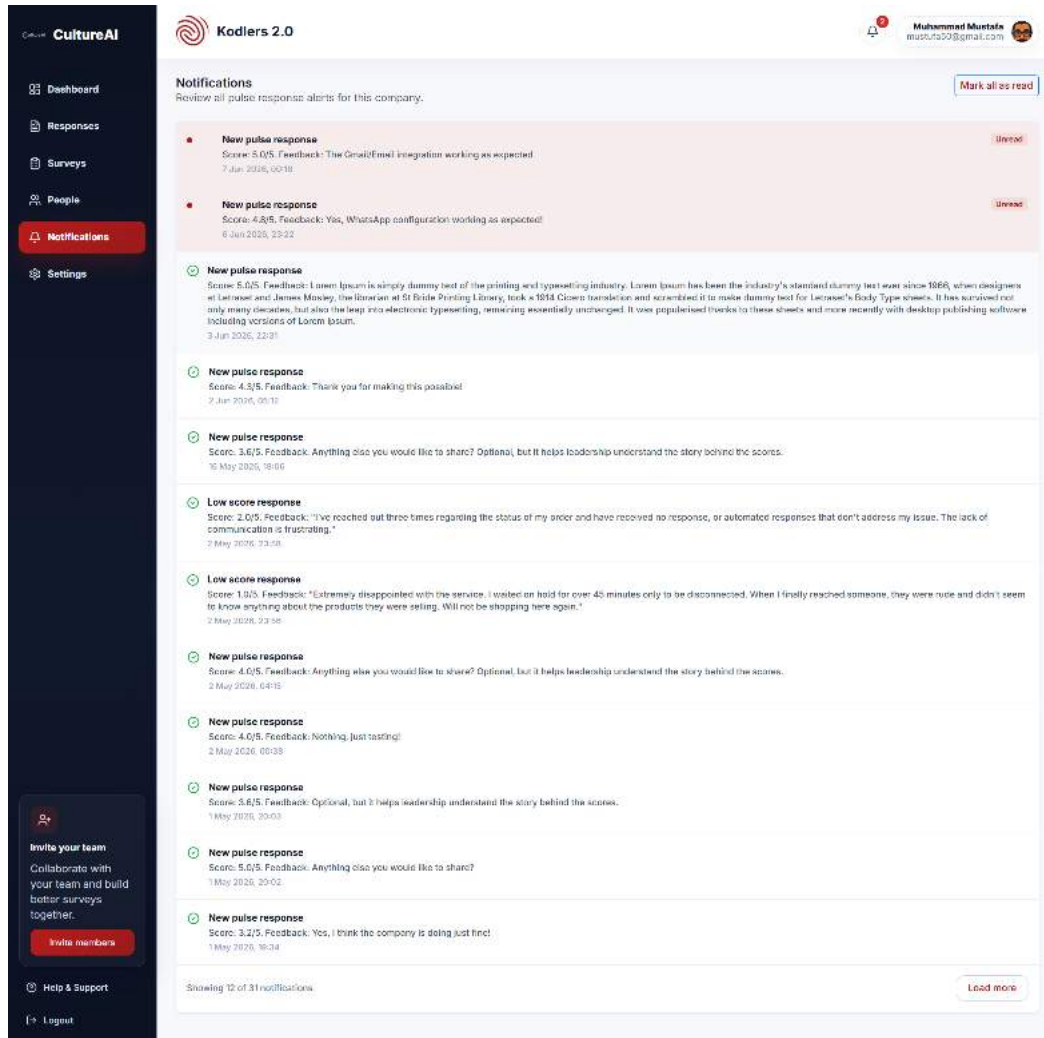


Fig 6 — Notifications Feed: Real-time pulse response alerts with score previews and priority flagging

FEATURE SHOWCASE

Pulse Survey Experience

The employee-facing pulse survey is clean, fast, and fully **mobile-responsive**. Each question maps to a specific culture metric. A progress stepper keeps employees oriented. The 1–5 rating scale includes descriptive labels so responses are consistent and meaningful.

Trust

Burnout risk

Engagement

Loyalty

Feedback



How would you rate trust?

Trust helps leaders understand clarity, transparency, and confidence.

1

Very bad

Needs urgent attention

☐

2

Bad

Needs improvement

☐

3

Okay

Average experience

☐

4

Good

Mostly positive

☐

5

Excellent

Strong and healthy

☐

Please select one option to continue

Fig 7 — Employee Pulse Form: Anonymous rating interface with metric-aligned questions and progress stepper

PROJECT SUMMARY

Built **end-to-end**. Solo.

- 01** **Sole Founder & Engineer**
Designed, built, and tested the entire platform — product, design, infrastructure, and AI layer — without a co-founder or team.
- 02** **Production-Ready Architecture**
Multi-tenant SaaS with isolated workspaces, role-based access, subscription gating, and anonymous data handling built for real paying customers.
- 03** **Real AI Integration**
Not a wrapper. OpenAI deeply integrated — structured prompts, JSON schema outputs, and weekly generative summaries grounded in actual response data.
- 04** **Multi-Channel Delivery**
Four fully working delivery methods (Email, Slack, WhatsApp, SMS) each with their own auth flow, fallback handling, and delivery status tracking.
- 05** **Status: Final QA**
The platform is functionally complete. Currently in final QA — happy to demo live on a call.

Ready to see it live?