



# Phase Shift 2025

AI-Assisted Alternate Nostril Breathing App

# The Problem

## Traditional Challenges

Practitioners struggle with proper form - maintaining spine alignment, eye closure, correct timing, and nostril switching without qualified instruction.



# AI Yoga Instructor

Phase Shift 2025 provides real-time guidance and correction during alternate nostril breathing practice with precision human eyes cannot match.



# Core Technology Stack

## MediaPipe Pose

95% accuracy real-time posture tracking for spinal alignment and body positioning

## Computer Vision

Eye state and facial positioning monitoring for proper meditation form

## Sensor Fusion

Smartphone sensors and audio analysis for breathing pattern detection

## On-Device Processing

Complete privacy – no personal data ever leaves your device

# Real-Time Correction Features

01

## Spinal Alignment Monitoring

Green, yellow, red indicators for posture correction with continuous spine tracking

02

## Head & Neck Positioning

Clinical-grade accuracy within 2-4 degrees for cervical alignment detection

03

## Eye State Detection

Facial landmark recognition with gentle audio reminders for closed-eye practice

04

## Nostril Switching Guidance

Visual cues for proper hand positions and correct alternating breathing patterns

05

## Breathing Rhythm Control

Precise 4-5 count timing with visual breathing guides that sync with your breath

# Mindful Interface Design

Camera feed with subtle overlay indicators for posture and breathing guidance. Central breathing circle animates to guide inhale/exhale rhythm.

Color-coded system: green for perfect form, yellow for minor adjustments, red for corrections needed.

Gentle audio cues enhance rather than interrupt the meditative experience.





## Technical Innovation

94%

Breathing Accuracy

Pattern classification precision

<50ms

Real-Time Speed

Video processing latency

4

Sensor Fusion

Computer vision, accelerometer,  
gyroscope, audio analysis

Multi-sensor approach with machine learning algorithms that adapt to individual practice patterns.

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THANK YOU

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