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# PROBLEM STATEMENT/IDEA

Millions mix Allopathy, Ayurveda, and Homeopathy without guidance → causing unsafe drug–herb interactions, delayed care, and confusion. Existing apps are siloed, unsafe, and lack transparency. With 80%+ of people globally using traditional + modern medicine (WHO), the risks are massive

## Why is this problem important?

- According to the WHO, 80%+ of the world's population uses a mix of traditional and modern medicine.
- Millions self-medicate by combining allopathy + Ayurveda + homeopathy without guidance → leading to dangerous drug–herb interactions, delayed care, or ineffective treatments.
- Rural and underserved populations often lack access to diverse healthcare expertise, making them more vulnerable to misinformation or unsafe practices.

## Current gaps or limitations in existing solutions

- Existing apps focus on only one system (allopathy telemedicine OR Ayurveda wellness OR homeopathy apps). There's no unified platform combining them safely.
- Limited Monitoring – Few solutions track outcomes, feedback, or adverse events, meaning no continuous improvement.



# NEXT-GEN SOLUTION & TECHNICAL APPROACH



## THE SOLUTION

Our AI Doctor is a unified health guidance assistant that integrates Allopathy, Ayurveda, and Homeopathy into a single, safe, and transparent platform. It delivers parallel recommendations, performs cross-system safety checks, and escalates high-risk cases to clinicians.

## CORE TECHNOLOGY APPROACH

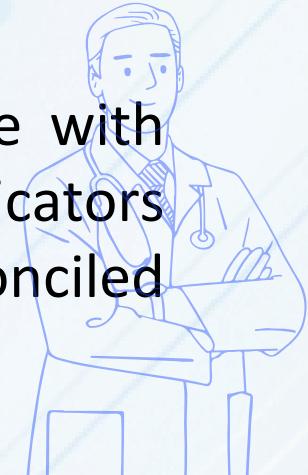
- NLP & OCR → Extract patient symptoms, history, and medical reports; normalize data using ICD/SNOMED and FHIR standards.
- Multi-Model Knowledge Pipelines
  - Allopathy: Clinical decision support via guidelines and probabilistic models.
  - Ayurveda: Dosha assessment using knowledge graphs and retrieval-augmented generation (RAG) on classical texts.
  - Homeopathy: Symptom similarity retrieval from repertoires.
- Reconciliation & Safety Engine → Graph-based detection of conflicts (drug–herb–allergy interactions) with automated red-flag triage.
- Explainability Layer → Evidence-linked recommendations with citations, confidence scores, and interpretability via SHAP/LIME.
- Clinician Dashboard → Human-in-the-loop review, decision overrides, and complete audit trails.

## EMERGING TECH LEVERAGE

AI + RAG for cross-tradition medical text understanding. Knowledge Graphs for drug–herb safety mapping. Continuous learning from clinician feedback to improve safety & accuracy.

## UNIQUE ASPECTS

First platform to unify modern and traditional medicine with safety-first design. Transparent evidence-level indicators (guideline-based vs. traditional practice). Parallel, reconciled recommendations instead of siloed advice.



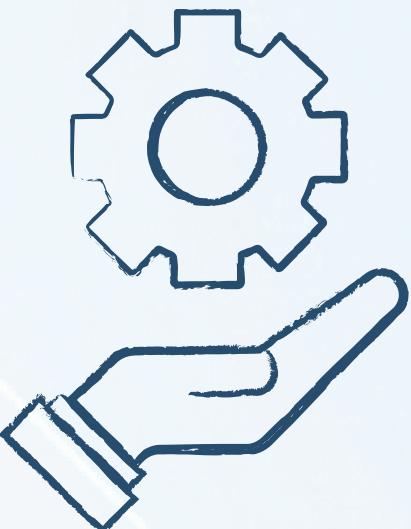
# IMPACT & TECHNICAL FEASIBILITY

## Quantified Potential Benefits

- Reduces unnecessary doctor visits/tests by 20–25%, while improving adherence through personalized plans.
- AI-driven preliminary diagnosis can save clinicians 30–40% consultation time.

## Quantified Potential Benefits

- NLP + Retrieval-Augmented Generation (RAG) + multi-model inference ensures efficient computation.



## Comparison with Existing Approaches

- Existing health apps → single-system, siloed, and opaque.
- Our approach → multi-system, safety-first, transparent, and clinician-in-the-loop, bridging gaps no current solution addresses.



# Expected Outcome

## Implementation Roadmap

- Prototype Build: Start with a minimal working web interface + core AI models for Allopathy, Ayurveda, and Homeopathy.
- Integrate Safety Checker: Add contraindication & interaction checks early to ensure trust.
- Testing with Sample Data: Validate outputs on small medical case datasets + collect feedback from peers and mentors.
- Clinician Dashboard: Introduce human-in-the-loop review system for complex cases.
- User Experience Polish: Add explainability layer.

## Continuous Improvement

- Regularly collect user + clinician feedback to refine AI outputs.
- Retrain models with new medical guidelines, research, and case data.
- Expand to wearable/IoT integration (health trackers, smart diagnostics), making the system proactive, not just reactive.

## Potential Challenges

- Data Quality: Ensuring reliable Ayurvedic & Homeopathic knowledge bases.
- Regulatory Concerns: Following privacy laws (GDPR/HIPAA) and ethical AI guidelines.
- User Trust: Convincing people to rely on AI for integrative healthcare.
- Interoperability: Connecting with existing health records, pharmacy, or lab systems.

## Scaling Strategy

- Core architecture can adapt to other integrative fields (e.g., nutrition + fitness, mental health).
- Cloud for scale, lightweight edge/on-device models for rural or low-internet areas.

