

SMART INDIA HACKATHON 2025



- **Problem Statement ID – SIH25024**
- **Problem Statement Title-** Cloud-Based Practice Management & Nutrient Analysis Software for Ayurvedic Dietitians, Tailored for Ayurveda-Focused Diet Plans
- **Theme- MedTech/BioTech/HealthTech**
- **PS Category- Software**
- **Team ID- 24**
- **Team Name- TechVeda**



Proposed Solution:

- ❖ TechVeda – a one-roof cloud platform uniting Ayurveda and modern technology for AI-driven, personalized nutrition.
- ❖ Ayurvedic wisdom digitized into smart solutions, enabling faster care, higher compliance, and measurable health outcomes.
- ❖ Dual-Portal Cloud Ecosystem: A cloud-based platform with dedicated logins for Ayurvedic Practitioners (practice management) and Patients (adherence tracking), digitizing diet chart management.
- ❖ AI-Powered Ayurvedic Analytics: Automated nutrient analysis and Ayurvedic food classification (Rasa, Guna, Vipaka) using an 8,000+ item food database, providing AI-generated, recipe-based diet recommendations tailored for Vata, Pitta, and Kapha.



How it Addresses the Problem:

- ❖ **Doctor/Dietitian Portal:** Enables quick input of patient details, semi-automated diet chart generation, and secure record management, reducing manual workload.
- ❖ **Patient Portal:** Provides access to prescribed diet charts, meal reminders, and adherence tracking, improving compliance and engagement.
- ❖ **Practice Management:** Cloud-based storage of patient history, lifestyle data, and previous prescriptions, ensuring accuracy and continuity of care.

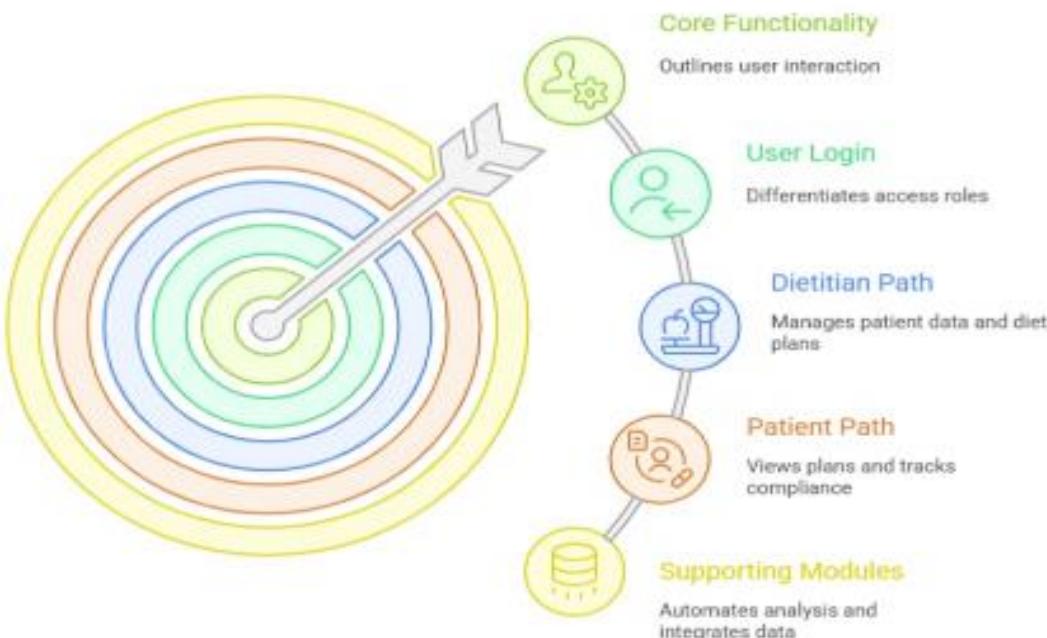
Innovation and Uniqueness:

- ❖ **Holistic, Ayurveda-First Design:** First-of-its-kind platform that integrates traditional Ayurvedic concepts (Doshas/Elements) with modern nutrition science for unique, personalized diet planning.
- ❖ **Automated, Recipe-Based Prescriptions:** Generates semi-automated diet charts with actual recipes/meals (not just ingredients) from a Dynamic Database, drastically reducing practitioner time while boosting patient adherence.
- ❖ **Clinical Ready & Secure:** Future-proofed with HIPAA/local law compliance and a design ready for seamless Integration with HIS & EHR, ensuring widespread clinical adoption and data security.

TECHNICAL APPROACH

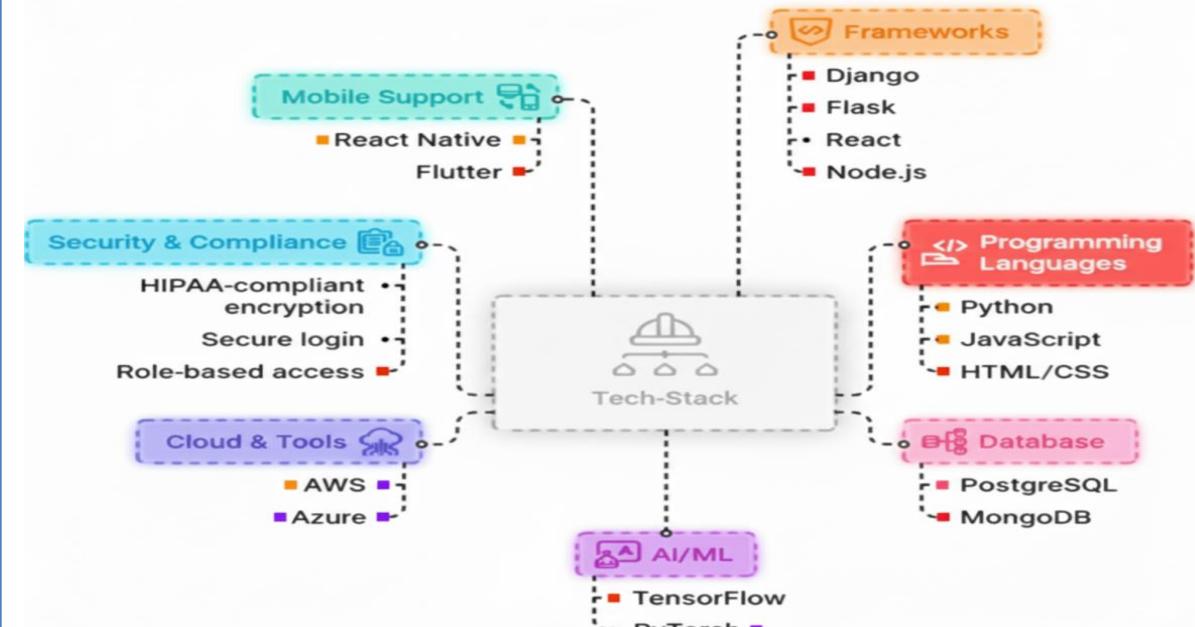
Platform Workflow

- The platform automates personalized, AI-driven diet plans, eliminating manual errors to boost patient compliance and data-driven results.



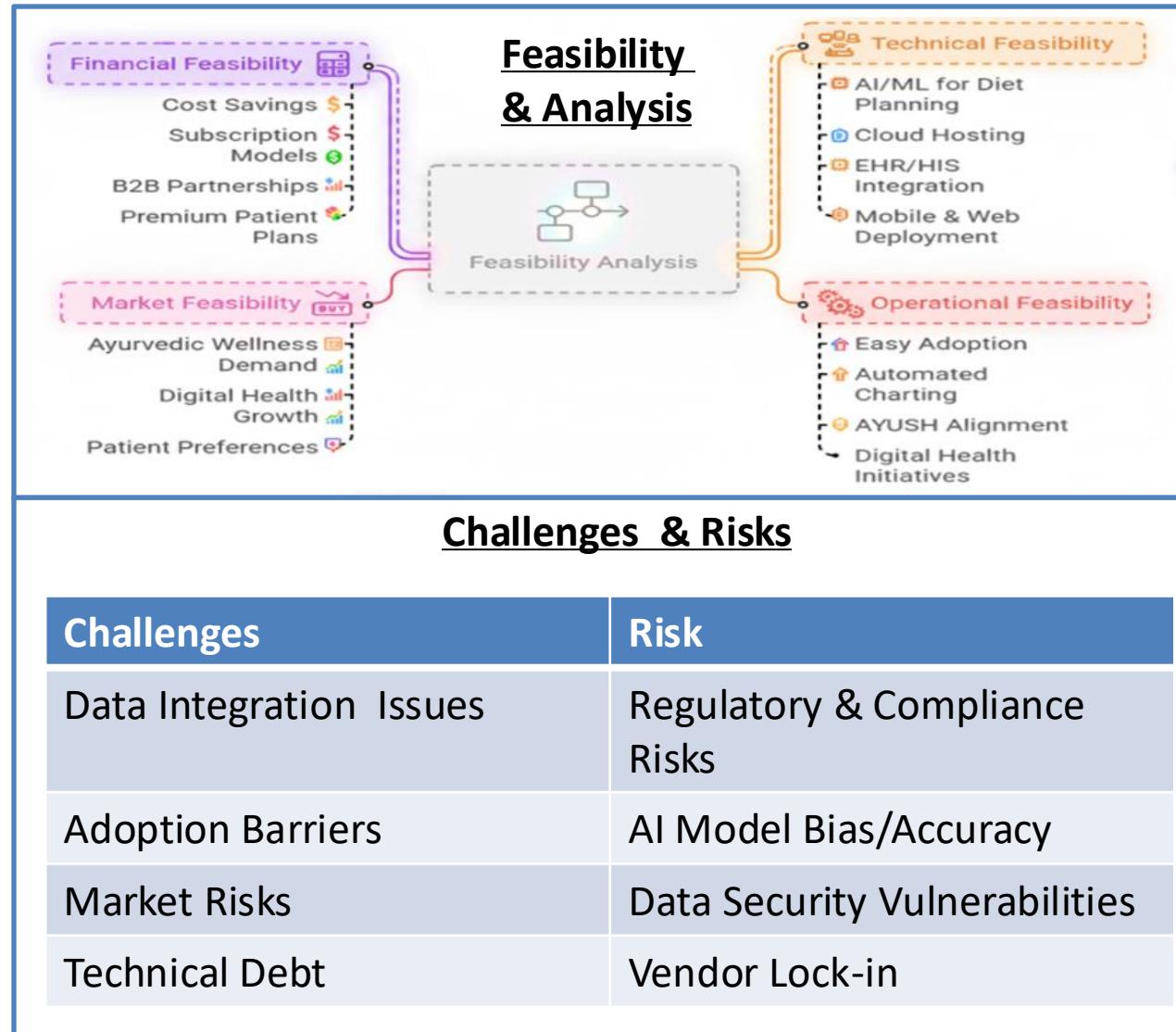
Tech-Stack

- Cloud-Native & AI-Powered**: Secure, scalable data management via AWS/Azure/GCP, fueled by ML/AI for automated nutrient analysis and personalized diet recommendations.



Checkout the DEMO: <https://preview--ayur-bloom-flow.lovable.app/>

FEASIBILITY AND VIABILITY



IMPACT AND BENEFITS

Potential Impact on the Target Audience:

- ❖ The solution delivers personalized Ayurvedic diet care through integrated planning, automated workflows, and secure compliance for practitioners and patients.

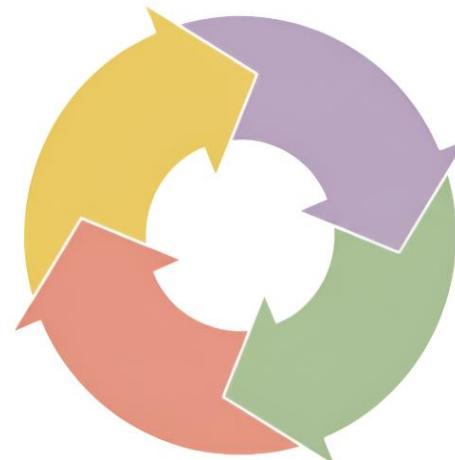
Personalized Healthcare Cycle



Superior Care
Enhancing patient outcomes and satisfaction



Secure Compliance
Ensuring data protection and regulations



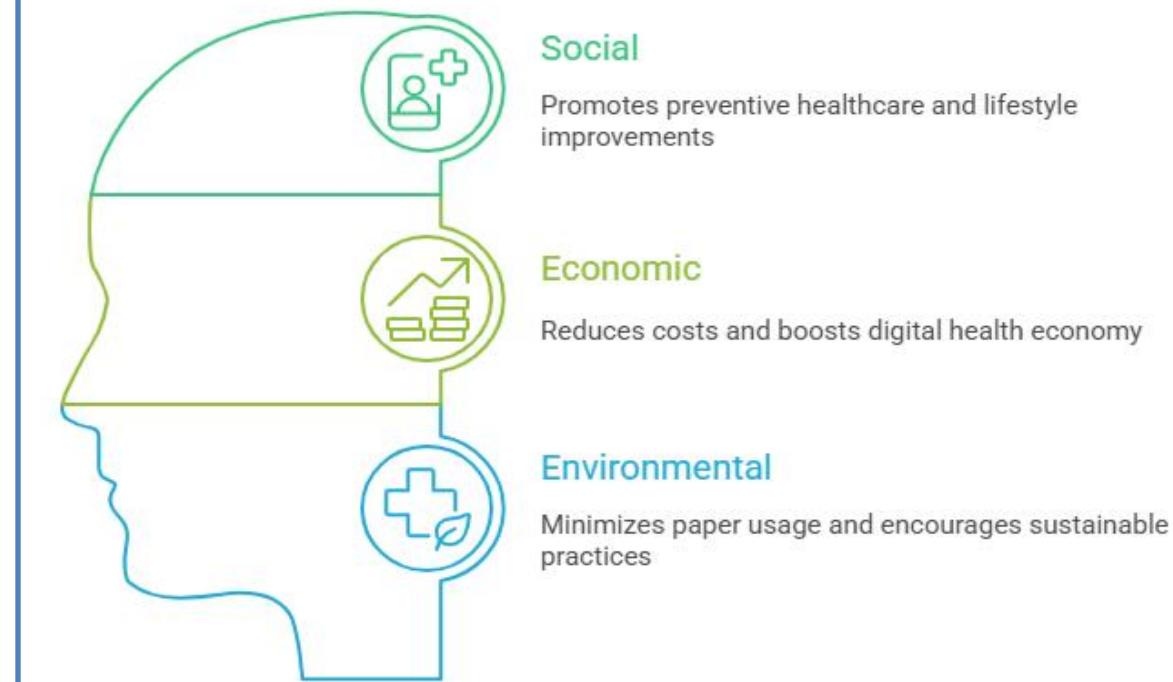
Holistic Diet Planning
Tailoring diets with Ayurvedic principles



Automation Integration
Streamlining processes with technology

Benefits of the Solution:

- ❖ The platform improves health by creating automatic diet plans, helping patients follow them, and allowing doctors to focus on care.



RESEARCH AND REFERENCES



❖ Integrating Traditional Nutritional Wisdom into Digital Nutrition

This is a perspective/review paper that discusses how to integrate traditional / culturally rooted food knowledge (like Ayurveda, indigenous food systems) into modern digital nutrition platforms. It highlights technical, cultural, and algorithmic challenges (e.g. standardization, loss of context).

<https://www.mdpi.com/2072-6643/17/12/1978/pdf>

❖ NUTRIVISION: A System for Automatic Diet Management in Smart Healthcare

This is a more “modern nutrition-software / AI + vision” example: it does food recognition, portion estimation, nutrient breakdown, and personalized diet recommendation. While it is not Ayurveda-specific, you can adapt the architecture modules and replace or augment its recommendation engine with Ayurvedic rules.

<https://arxiv.org/abs/2409.20508>

❖ An IoT based Ayurvedic approach for real time healthcare monitoring

Combines sensor data (pulse signals / Nadi Pariksha) with cloud upload, classification of Vata/Pitta/Kapha signals, and real-time monitoring. This shows a practical case of integrating Ayurvedic diagnostics into a cloud system.

<https://www.aimspress.com/aimspress-data/electreng/2022/3/PDF/electreng-06-03-020.pdf>

