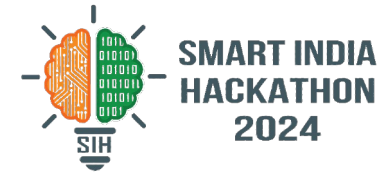
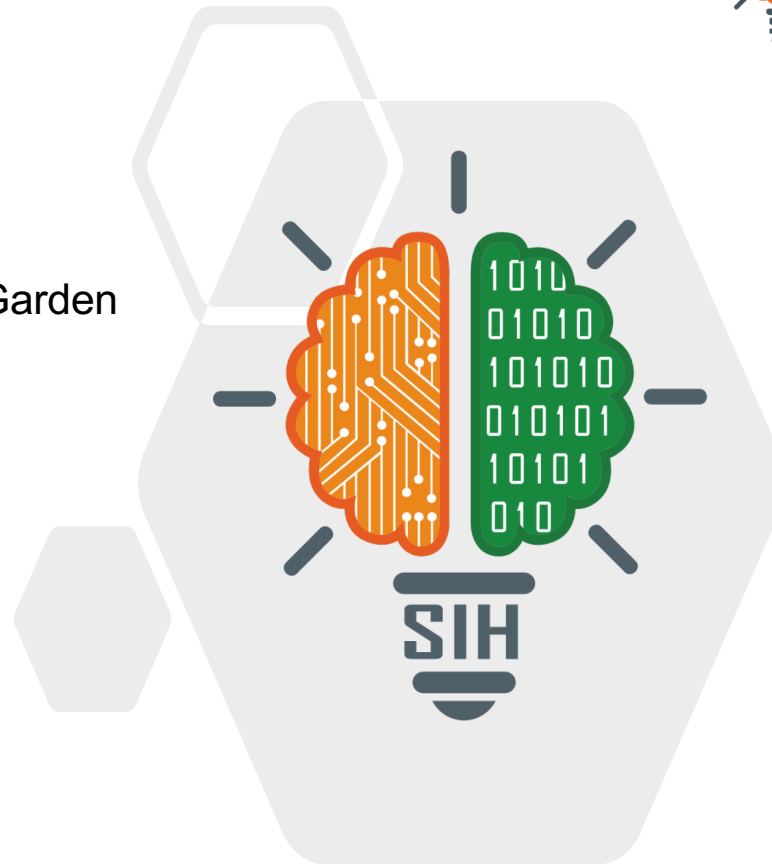


# SMART INDIA HACKATHON 2024



- **Problem Statement ID** - SIH1555
- **Problem Statement Title** - Virtual Herbal Garden
- **Organization** - Ministry of Ayush
- **Theme** - MedTech/BioTech/HealthTech
- **PS Category** - Software
- **Team ID** - 2024T9
- **Team Name** - Team AyurAstra



# Virtual Herbal Garden

## Proposed Solution

**Virtual Herbal Garden:** A digital platform showcasing AYUSH medicinal plants in a 3D virtual environment.

- **Immersive 3D Models:** Users can explore plants from all angles, zoom in, and rotate models.
- **Advanced Search & Filters:** Locate plants by medicinal use, region, or type.
- **Guided Tours:** Thematic tours (e.g., plants for digestion, immunity).
- **User Interaction:** Bookmark, take notes, and share on social media.
- **Multimedia Integration:** Images, videos, and audio guides for enhanced learning.

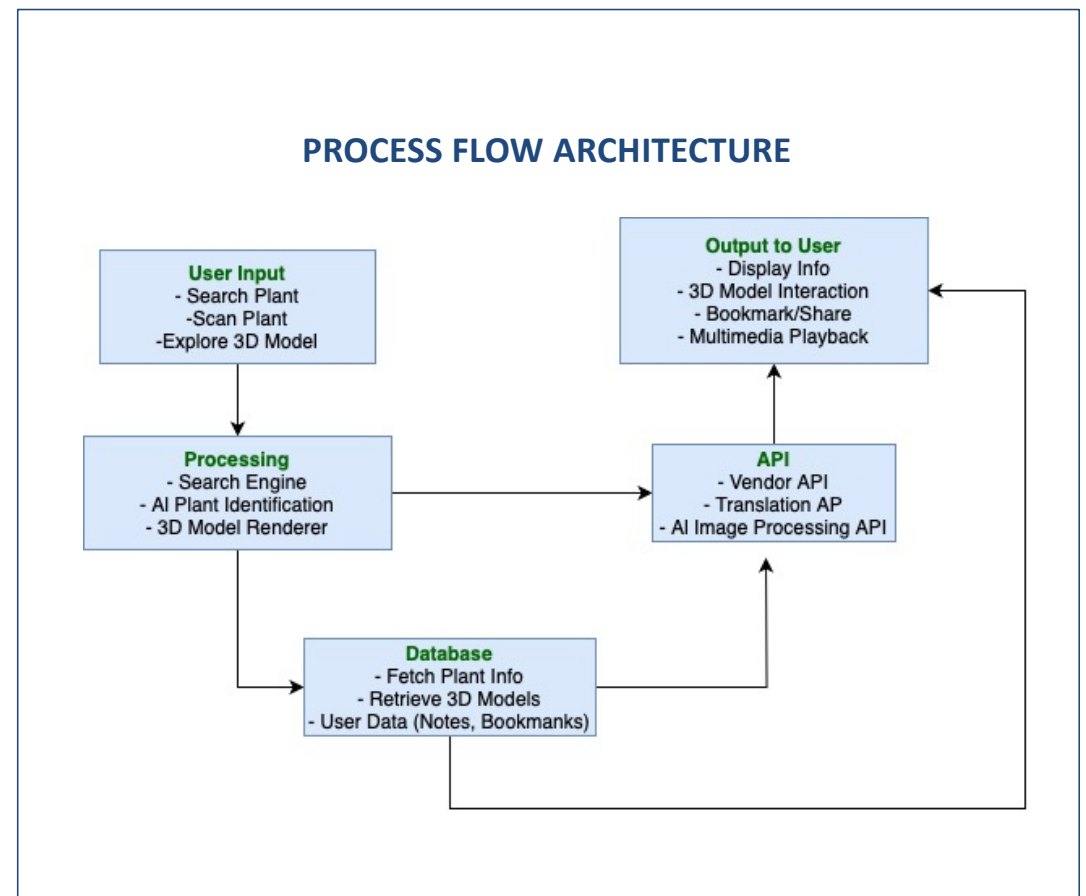
## Problem Resolution

- **Accessibility:** Physical gardens are limited; this digital platform is accessible anywhere.
- **Awareness:** Increases knowledge about AYUSH plants and their medicinal uses.
- **Plant Identification:** AI-powered scanning for instant plant identification.
- **Practical Knowledge:** Audio guides for making herbal remedies like kaada and syrups.

## Unique Value Proposition

- **Interactive & Immersive:** 3D models provide a unique, engaging learning experience.
- **Comprehensive & User-Friendly:** Advanced search, AI identification, and multimedia tools.
- **Scalable Business Model:** Subscription services, educational partnerships, in-app purchases, and advertising opportunities.

# TECHNICAL APPROACH



# FEASIBILITY AND VIABILITY

## Feasibility of the Idea

- **Utilizes proven technologies** (React Native, Three.js, Node.js) to build both web and mobile applications.
- Open-source libraries (WebRTC, MongoDB) **reduce cost and development time.**
- Business potential through **subscriptions, partnerships, and in-app purchases.**
- **Agile Development**, Rapid iteration cycles and milestone tracking to ensure timely delivery and continuous refinement.

## Challenges and Risks

- **Technical**: Efficient **3D rendering**; precise **image scanning**; seamless **real-time updates.**
- **Market**: **User adoption barriers**; creating compelling **value proposition.**
- **Data Security**: Protecting **user data**; maintaining **regulatory compliance.**

## Mitigation Strategies

- **Optimization**: Efficient 3D models, robust algorithms, continuous updates.
- **Adoption**: User testing, partnerships with AYUSH bodies.
- **Security**: Encryption with OAuth 2.0, JWT.

# IMPACT AND BENEFITS

## Potential Impact

- **Widespread Accessibility:** Democratizes access to **AYUSH medicinal knowledge for billions**, revitalizing interest in traditional health practices.
- **Cultural and Health Renaissance:** Revives ancient health practices, promoting wellness through time-tested, **natural treatments**.

## Key Benefits

- **Social Impact:** Encourages holistic health approaches; empowers people with knowledge of AYUSH-based therapies.
- **Economic Impact:** Drives revenue through subscriptions and in-app purchases; connects plant vendors to a vast market.
- **Environmental Impact:** Promotes **sustainable harvesting** and cultivation of medicinal plants; **raises awareness about biodiversity and conservation**.



AYUSH - (Ayurveda, Yoga & Naturopathy, Unani, Siddha, Homeopathy)



# RESEARCH AND REFERENCES

- ❖ Ayurvedic Pharmacopoeia of India (API): [API Volume 1 PDF](#)
- ❖ List of Plants in CCRAS Demonstrative Gardens: [CCRAS Drug Research](#)
- ❖ Indian Medicinal Plants Database: [India Biodiversity Portal](#)
- ❖ Books:
  - **Ayurvedic Medicinal Plants:** A Comprehensive Guide by V. K. Gupta
  - **Indian Medicinal Plants:** A Compendium of 500 Species by A. K. Chopra, K. L. Handa, and L. D. Varma