



# SwasthyaAI

Smart Ayurveda for Women's Wellness

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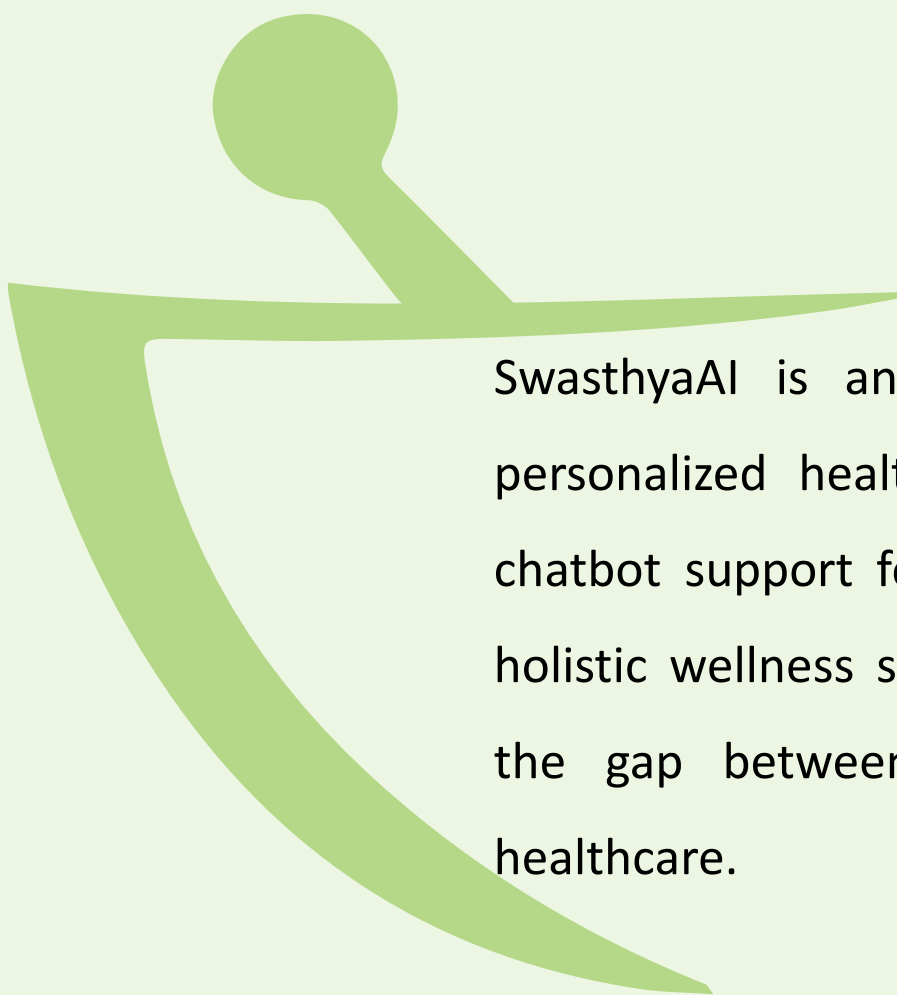


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# INTRODUCTION



SwasthyaAI is an AI-driven healthcare assistant that empowers women with personalized health insights. It integrates Machine Learning, Ayurveda, and AI chatbot support for tailored recommendations. By enabling early diagnostics and holistic wellness solutions, it accelerates proactive healthcare. SwasthyaAI bridges the gap between traditional and modern medicine for accessible women's healthcare.

# WOMEN'S HEALTH

Importance of Women's Health



# WOMEN'S HEALTH

Key Factors that can Impact Women's Health

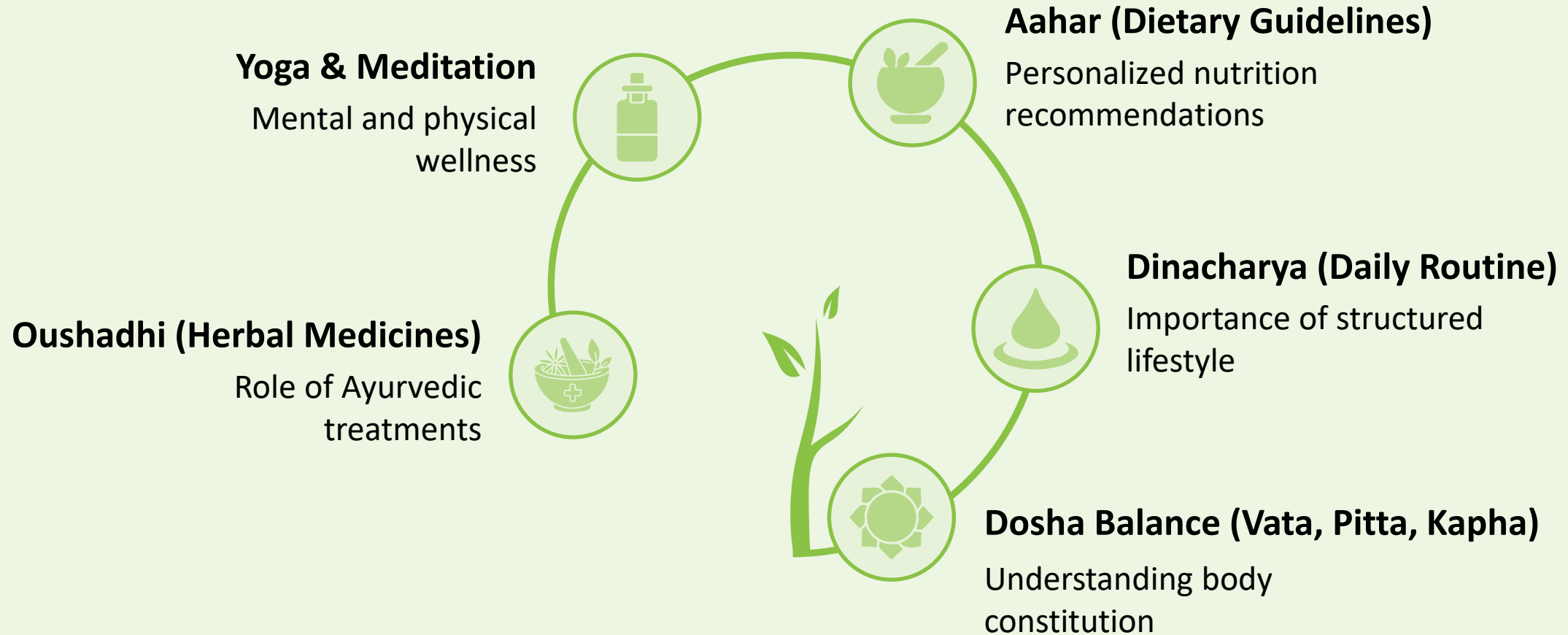


# WOMEN'S HEALTH

Strategies to Promote and Enhance Women's Health



# PRINCIPLES OF AYURVEDA

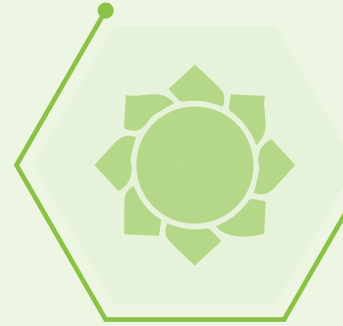


# AYURVEDA IN MODERN HEALTHCARE



## Herbal Medicine & Natural Remedies

Ayurveda uses natural herbs like Turmeric, Ashwagandha, and Tulsi to treat diseases.



## Gut Health & Digestive Balance

Ayurveda emphasizes Agni (digestive fire) for maintaining overall health.



## Holistic Healing & Lifestyle Integration

Ayurveda promotes a balanced lifestyle (Dinacharya) based on body types (Vata, Pitta, Kapha).



## Stress Management & Mental Well-being

Techniques like meditation, yoga, and breathing exercises (Pranayama) are part of Ayurveda.





# OBJECTIVE



Promote **personalized healthcare**  
using Ayurveda & AI



Improve **women's health** through  
holistic & data-driven solutions



Integrate **ancient wisdom** with  
modern technology (AI + Ayurveda)



Provide **real-time health guidance**  
for individuals



# PROBLEM STATEMENT

Women's health issues like PCOS, thyroid disorders, and menstrual irregularities are often misdiagnosed due to a lack of **personalized and holistic healthcare**. Conventional medicine follows a **generic approach**, ignoring individual body types (Prakriti), lifestyle, and environmental factors. There is a need for an **AI-powered Ayurveda Health Assistant** that provides **tailored diagnostics, predictive insights, and Ayurvedic recommendations** for women's well-being.

## Challenges in Women's Health

- 🚨 **Lack of Personalized Care** – Generic treatments overlook Prakriti & lifestyle.
- 🚨 **Hormonal Imbalances** – PCOS, menopause, and thyroid disorders on the rise.
- 🚨 **Limited Awareness** – Preventive healthcare & Ayurveda insights are inaccessible.
- 🚨 **Fragmented Solutions** – No AI-integrated Ayurveda-based diagnostic system.

## Need for an AI-Powered Ayurveda Health Assistant

- ◆ **Bridges Ayurveda & AI** for holistic, accessible, and personalized healthcare.
- ◆ **Predicts health risks** and provides tailored Ayurvedic recommendations.
- ◆ **Empowers women** with proactive, data-driven wellness solutions. 🌿 🤖



# PROPOSED SOLUTION

To address the challenges in women's healthcare, **SwasthyaAI** integrates **Artificial Intelligence and Ayurveda** to offer a **personalized, predictive, and holistic healthcare approach**.

## ◆ Key Features of SwasthyaAI

### ✓ AI-Powered Personalized Diagnostics

→ Analyzes Prakriti (body type), lifestyle, and environmental factors to provide tailored insights.

### ✓ Predictive Health Monitoring

→ Detects early warning signs for hormonal imbalances such as PCOS, thyroid disorders, and menopause.

### ✓ Ayurvedic Health Recommendations

→ Offers customized herbal, dietary, and lifestyle solutions based on an individual's health profile.

### ✓ Integrated Health Ecosystem

→ Combines AI-driven predictive analysis with traditional Ayurvedic wisdom to enhance preventive and therapeutic care.

## 🌱 Impact & Benefits

🚀 Empowers women with **data-driven, proactive healthcare**

💡 Bridges **technology and Ayurveda** for **accessible and effective** health solutions

💊 Encourages **preventive care** rather than reactive treatments



# HOW TECHNOLOGY POWERS CHANGE?

SwasthyaAI is an AI-powered Ayurveda healthcare system that:

1. Uses Machine Learning to analyze symptoms and predict possible conditions.
2. Provides personalized Ayurveda-based health recommendations (Doshas, Prakriti).
3. Offers lifestyle modifications through yoga, diet, and herbal treatments.
4. Integrates a chatbot (Gemini AI) for real-time medical guidance.



## **How AI & Ayurveda Provide Personalized Healthcare**

1. AI-driven health assessments based on symptoms & Dosha type
2. Ayurveda-backed remedy suggestions for diet, herbs, and yoga
3. Smart lifestyle recommendations based on daily routine & habits



## **Key Features & Benefits**

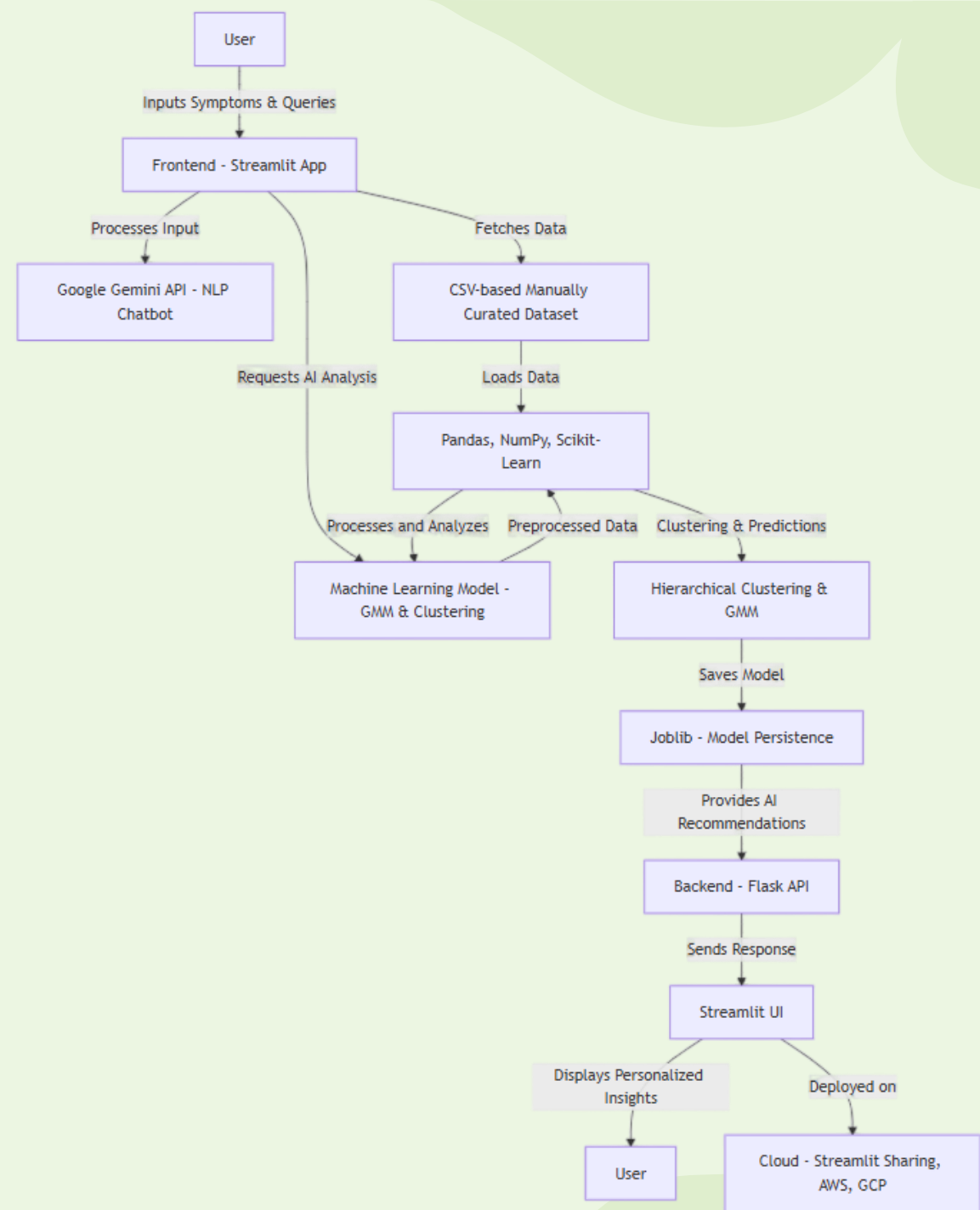
- ✓ Early detection of women-specific diseases
- ✓ Personalized diet & lifestyle recommendations
- ✓ Ayurveda-based remedies & holistic wellness plans
- ✓ AI-based chatbot for quick medical responses



# TECHNOLOGY STACK

Category	Technology/Tool	Purpose
Programming Language	Python	Core language for AI & web app development
Framework	Streamlit	Frontend framework for interactive UI
Libraries Used	Pandas, NumPy, Seaborn	Data handling, processing, and visualization
Machine Learning/Clustering Algorithms	Scikit-Learn (GMM,Hierarchial Clustering)	AI-based clustering and segmentation
Chatbot Integration	Google Gemini API	NLP & AI-powered chatbot
Frontend	Streamlit	Python-based UI framework
Model Deployment	Joblib	Saving and loading ML models
Data Sources	Manually Curated from Government Health Databases, Ayurveda Texts and Ancient Ayurveda Books	Training AI models & knowledge base
Deployment	Local/Cloud (Streamlit Sharing, AWS, GCP)	Hosting & accessibility

# SYSTEM ARCHITECTURE



# RESULTS

1	Disease	Symptoms	Diagnosis & Tests	Symptom Severity	Duration of Treatment
2	Endometriosis	Pelvic pain, heavy periods, pain during interc	Pelvic exam, ultrasound, laparoscopy	Mild to severe	Long-term
3	Menstrual Disorders	Irregular cycles, severe cramps, excessive or	Blood tests (hormone levels), ultrasound, m	Mild to severe	Varies based on type
4	Premenstrual Syndrome (PMS)	Mood swings, bloating, headaches, breast te	Symptom tracking, hormonal level tests	Mild to moderate	Short-term, cyclic
5	Uterine Fibroids	Heavy menstrual bleeding, pelvic pain, frequ	Ultrasound, MRI, Pelvic exam	Moderate to severe	Long-term management
6	Ovarian Cysts	Pelvic pain, bloating, irregular periods, nause	Ultrasound, hormone tests, pelvic exam	Mild to severe	Usually short-term unless recurrent
7	Menopause & Perimenopause	Hot flashes, night sweats, mood swings, fati	Hormone level tests, symptom tracking	Mild to severe	Long-term management
8	Hormonal Imbalances	Fatigue, weight gain/loss, mood swings, irreg	Blood tests for hormone levels, thyroid func	Mild to severe	Long-term management
9	Infertility & Reproductive Health	Irregular periods, difficulty conceiving, horm	Ultrasound, blood hormone tests, hysterosa	Moderate to severe	Months to years depending on cause
10	Gestational Diabetes	Increased thirst, frequent urination, fatigue,	Glucose tolerance test, fasting blood sugar t	Moderate to severe	Throughout pregnancy

## Common Women's Health Conditions

1	Medical History	Current Medications	Risk Factors	Environmental Factors
2	Painful periods, infertility history	Pain relievers, hormonal therapy	Genetics, high estrogen levels	Exposure to endocrine disruptors
3	History of irregular cycles, hormonal imbal	Painkillers, hormonal therapy	PCOS, thyroid disorders, stress	Lifestyle, diet, stress
4	History of hormonal fluctuations, stress	Pain relievers, hormonal therapy	Hormonal imbalance, high stress	Diet, lifestyle
5	History of irregular periods, anemia	Hormonal therapy, NSAIDs	High estrogen levels, genetics, obesity	Exposure to xenoestrogens
6	PCOS, history of cysts	Pain relievers, birth control pills	Hormonal imbalance, endometriosis	Diet, lifestyle
7	History of hormonal fluctuations	Hormone replacement therapy (HRT), suppl	Aging, genetics, lifestyle	Stress, diet, exposure to toxins
8	PCOS, thyroid disorders, menopause	Hormonal therapy, thyroid medications, sup	Stress, poor diet, obesity, genetic predisposi	Endocrine disruptors, pollution, diet
9	PCOS, endometriosis, thyroid disorders	Fertility drugs, hormone therapy	Age, obesity, smoking, excessive stress	Exposure to toxins, pesticides, poor diet
10	Family history of diabetes, obesity	Insulin therapy if needed	Obesity, previous gestational diabetes, high	Diet, sedentary lifestyle, stress

## Medical History and Risk Factors



# RESULTS

1	Age Group	Occupation and Lifestyle	Herbal/Alternative Remedies	Ayurvedic Herbs	Formulation	Herbal Tea(Recommended)
2	20-45 years	Stressful jobs can exacerbate symptoms	Turmeric, ginger, flaxseeds	Ashoka, Guggulu, Shatavari	1 tsp turmeric and honey paste daily	1 tsp turmeric + 1 tsp ginger + 1 cup hot water (steep for 10 min)
3	12-50 years	Stress and sedentary lifestyle impact symptoms	Ginger, turmeric, fennel seeds	Ashoka, Lodhra, Dashmool	1 tsp fennel seeds boiled in water daily	1 tsp fennel seeds + 1 tsp cinnamon + 1 cup hot water (steep for 10 min)
4	15-45 years	Stress-related symptoms	Chamomile, evening primrose oil	Shatavari, Brahmi, Ashwagandha	1 tsp flaxseeds + warm water daily	1 tsp chamomile + 1 tsp fennel + 1 cup hot water (steep for 10 min)
5	30-50 years	High-stress jobs can worsen symptoms	Turmeric, green tea, flaxseeds	Ashoka, Triphala, Gokshura	1 tsp Triphala powder + warm water at night	1 tsp green tea + 1 tsp cinnamon + 1 cup hot water (steep for 10 min)
6	15-45 years	Sedentary lifestyle increases risk	Spearmint, flaxseeds, cinnamon	Ashoka, Lodhra, Gokshura	1 tsp flaxseed powder + warm water daily	1 tsp spearmint + 1 tsp cinnamon + 1 cup hot water (steep for 10 min)
7	40-60 years	Sedentary lifestyle increases severity	Black cohosh, soy, flaxseeds	Shatavari, Ashwagandha, Yashtimadhu	1 tsp Shatavari powder + warm milk before bed	1 tsp fennel + 1 tsp flaxseed + 1 cup hot water (steep for 10 min)
8	15-60 years	High-stress jobs, sedentary lifestyle	Maca root, flaxseeds, ashwagandha	Shatavari, Ashwagandha, Triphala	1 tsp Ashwagandha powder + warm milk before bed	1 tsp spearmint + 1 tsp cinnamon + 1 cup hot water (steep for 10 min)
9	20-45 years	High-stress jobs, exposure to chemicals	Vitex, maca root, royal jelly	Shatavari, Ashwagandha, Gokshura	1 tsp Shatavari powder + honey + warm milk before bed	1 tsp fenugreek + 1 tsp cinnamon + 1 cup hot water (steep for 10 min)
10	25-45 years (pregnant)	Sedentary work increases risk	Bitter melon, fenugreek, cinnamon	Vijaysar, Gudmar, Methi	1 tsp fenugreek powder + warm water (before bed)	1 tsp fenugreek + 1 tsp cinnamon + 1 cup hot water (steep for 10 min)

## Lifestyle, Remedies, and Herbal Interventions

1	Diet and Lifestyle Recommendations	Yoga & Physical Therapy	Medical Intervention	Prevention	Complications	Recovery & Maintenance Tips
2	Warm, anti-inflammatory foods	Butterfly pose, gentle stretching	Surgery, hormonal therapy	Difficult, but early treatment helps	Infertility, chronic pain	Regular follow-ups, pain management
3	Warm foods, regular hydration	Child's pose, gentle stretching	Hormonal therapy, iron supplements	Balanced diet, stress management	Anemia, infertility	Regular menstrual tracking, healthy diet
4	Hydration, stress management	Anulom Vilom, Pranayama	NSAIDs, hormonal therapy	Balanced lifestyle	Mood disorders, anxiety	Maintain regular sleep, healthy diet
5	High-fiber diet, stress reduction	Surya Namaskar, Baddha Konasana	Surgery, hormonal therapy	Maintaining healthy estrogen levels	Anemia, fertility issues	Regular check-ups, iron-rich diet
6	Low-carb diet, hydration	Butterfly pose, gentle stretching	Birth control, surgery in severe cases	Balanced diet, stress management	Infertility, pain	Regular check-ups, healthy diet
7	Estrogen-rich foods, stress reduction	Pranayama, restorative yoga	HRT, lifestyle changes	Healthy aging, balanced hormones	Osteoporosis, cardiovascular risks	Hydration, relaxation, balanced diet
8	Balanced meals, reduced sugar intake, stress management	Anulom Vilom, restorative yoga	Hormone therapy, lifestyle changes	Healthy diet, stress reduction, regular exercise	Increased risk of metabolic disorders, infertility	Hydration, relaxation, regular check-ups
9	Anti-inflammatory diet, stress reduction	Baddha Konasana, Viparita Karani	IVF, fertility treatments, hormonal therapy	Healthy diet, avoiding toxins, maintaining healthy weight	Increased risk of miscarriage, PCOS-related issues	Maintain healthy weight, stress reduction, regular check-ups
10	Low sugar diet, frequent small meals	Walking, prenatal yoga	Insulin therapy if necessary	Healthy diet, weight management	Increased risk of Type 2 diabetes later in life	Regular glucose monitoring, balanced diet, prenatal care

## Holistic Treatment and Prevention Strategies



# RESULTS

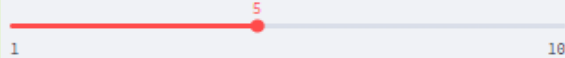
## SwasthyaAI: Ayurveda Health Assistant

### Provide Your Health Details

Enter Symptoms (comma-separated)

Headache, dizziness, shortness of breath

Symptom Severity



Select Age Group

20-45 years

Enter Medical History

high blood pressure

Enter Current Medications

Antihypertensive drugs

Select Physical Activity Levels

Moderate

Select Dietary Habits

High sugar and processed food intake worsens symptoms

Select Occupation and Lifestyle

High-stress jobs, sedentary lifestyle

Select Doshas

Pitta-Kapha imbalance

Select Prakriti

Pitta predominant

Get Health Insights

Clear Chat History



## SwasthyaAI: Smart Ayurveda for Women's Wellness

Welcome to SwasthyaAI – your AI-powered Ayurveda health assistant! 🌿💡

Provide your health details to receive **personalized Ayurvedic insights**.



### Personalized Ayurvedic Recommendations

🔴 **Disease:** Hypertension

📋 **Diagnosis & Tests:** Blood pressure measurement, lipid profile, ECG, kidney function tests

🕒 **Duration of Treatment:** Lifelong management

⚠️ **Risk Factors:** Obesity, high salt intake, smoking, stress, genetic predisposition

🌐 **Environmental Factors:** Sedentary lifestyle, air pollution, noise pollution

🌿 **Herbal Remedies:** Arjuna, Brahmi, Garlic, Ashwagandha

🌿 **Ayurvedic Herbs:** Arjuna, Brahmi, Sarpagandha, Jatamansi

🍵 **Recommended Herbal Formulation:** Arjuna powder with warm water (1 tsp daily)

🍵 **Recommended Herbal Tea:** Hibiscus tea (Dried hibiscus petals, warm water, honey)

🍽️ **Diet & Lifestyle Tips:** Low-sodium diet, increased potassium intake, regular exercise

🧘 **Yoga & Physical Therapy:** Anulom-Vilom, Shavasana, Bhramari

💊 **Medical Intervention:** Antihypertensive therapy, regular BP monitoring

🛡️ **Preventive Measures:** Healthy diet, active lifestyle, stress management

⚠️ **Complications to Watch For:** Stroke, kidney damage, heart attack

👤 **Recovery & Maintenance Tips:** Reduce salt intake, practice meditation

D

# Prototype

# MARKET COMPARISON AND UNIQUENESS

Feature	Smart Women's Health Assistant	Other Market Solutions
AI-Based Women's Health Analysis	✔ Yes	⚠ Limited
Ayurveda + AI Integration	✔ Yes	✗ No
Personalized Dosha-based Advice	✔ Yes	✗ No
Chatbot for Health Queries	✔ Yes (Gemini AI)	✗ No
Diet & Yoga-Based Recommendations	✔ Yes	✗ No

## 💡 Why is SwasthyaAI Solution Better?






- ✔ Bridges AI & Ayurveda for holistic women's health care.
- ✔ AI-driven clustering for personalized health analysis.
- ✔ Integrated Chatbot for real-time assistance.
- ✔ Empowers women to take control of their health with preventive solutions.

# CONCLUSION AND FUTURE SCOPE

## CONCLUSION

SwasthyaAI leverages AI and Ayurveda to provide a personalized and holistic approach to women's healthcare. By integrating Hierarchical Clustering, Gaussian Mixture Models (GMM), and NLP-powered chatbots, it offers data-driven health insights tailored to individual body types (Vata, Pitta, Kapha). The system enhances early detection, preventive care, and lifestyle recommendations, addressing challenges in women's health diagnosis and awareness. With a user-friendly Streamlit interface and Google Gemini API integration, SwasthyaAI ensures accessibility and intelligent health guidance for women.

## FUTURE SCOPE

-  Enhancing AI Models: Implementing Deep Learning & Reinforcement Learning for more accurate Ayurvedic health predictions.
-  Expanding Datasets: Integrating real-time health data from wearables (smartwatches, fitness trackers) for more precise analysis.
-  Advanced Chatbot Features: Improving NLP capabilities with multilingual support for better accessibility across diverse populations.
-  Integration with Healthcare Systems: Collaborating with Ayurvedic practitioners & medical professionals for validation and improved AI recommendations.
-  Cloud-Based Expansion: Deploying on AWS/GCP for real-time health monitoring & remote access.

This future vision ensures SwasthyaAI continues evolving as a cutting-edge AI-powered Ayurvedic health assistant, bridging the gap between technology and holistic wellness. 🌿💡



**THANK  
YOU!**