



PCOD/PCOS HEALTH TRACKER: A SMART SYSTEM FOR MONITORING WOMEN'S HEALTH

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Abstract: Polycystic Ovarian Disease (PCOD) and Polycystic Ovary Syndrome (PCOS) are common hormonal disorders affecting a large number of women, especially in their reproductive age. These conditions often lead to irregular menstrual cycles, weight fluctuations, acne, and other health complications. Due to busy lifestyles and lack of awareness, many women fail to monitor their symptoms regularly. This research proposes a PCOD/PCOS Health Tracker system that helps users record, monitor, and analyze their health data in a structured way. The system focuses on tracking menstrual cycles, symptoms, lifestyle habits, and basic health indicators. By providing a centralized platform, the proposed solution aims to improve awareness, encourage healthy habits, and support early detection of health issues. The system is designed to be user-friendly and accessible, making it suitable for everyday use.

Keywords: PCOD, PCOS, Machine Learning, Healthcare AI, Predictive Analytics, mHealth Application, Logistic Regression, Random Forest

I. INTRODUCTION

In recent years, the number of women diagnosed with PCOD and PCOS has increased significantly. These conditions are mainly caused by hormonal imbalance and can affect overall health if not managed properly. Common symptoms include irregular periods, excessive hair growth, acne, and weight gain. In many cases, the condition goes unnoticed for a long time due to lack of awareness or irregular tracking of symptoms. This project aims to develop a PCOD/PCOS Health Tracker that provides a simple and organized way for users to track their symptoms, menstrual cycle, and lifestyle habits. The system is designed to support better health management and promote awareness among users. With the growing use of digital technologies, health tracking applications have become more popular. However, most existing applications are general period trackers and do not specifically focus on PCOD/PCOS-related health concerns. This creates a gap where users are unable to monitor their condition effectively.

II. LITERATURE REVIEW

Several mobile and web-based health applications are available that help users track their menstrual cycles. Popular apps provide features such as cycle prediction, reminders, and general health tips. While these applications are useful, they are not specifically designed for managing PCOD or PCOS.

Studies have shown that women with PCOD/PCOS require more detailed tracking, including symptoms like mood changes, weight variations, and hormonal patterns. Existing systems often lack personalized recommendations and do not focus on long-term health monitoring. Some research has also highlighted the importance of lifestyle management, including diet and exercise, in controlling PCOD/PCOS symptoms. However, many applications do not integrate these aspects effectively. Based on this analysis, it is clear that there is a need for a dedicated system that focuses specifically on PCOD/PCOS management, combining symptom tracking, lifestyle monitoring, and user-friendly design.

III. PROBLEM STATEMENT

Many women suffering from PCOD/PCOS do not have access to a simple and dedicated system to track their health regularly. Existing applications are either too general or lack important features required for managing these conditions. As a result, users are unable to maintain consistent records or identify patterns in their health, which can delay proper care and management.



IV. OBJECTIVES

The main objectives of this project are:

- To develop a system for tracking PCOD/PCOS-related health data
- To help users monitor their menstrual cycle and symptoms regularly
- To provide a structured way of recording lifestyle habits such as diet and exercise
- To improve awareness about PCOD/PCOS and its management
- To assist users in identifying patterns and changes in their health

V. METHODOLOGY

The proposed system is designed as a user-friendly health tracking platform. Users can enter their daily health details, including menstrual cycle information, symptoms, weight, and lifestyle habits. The system processes this data and organizes it into a structured format, allowing users to easily review their health records over time. Based on the entered data, the system can provide basic insights such as cycle patterns and symptom trends. The development of the system involves the use of web technologies such as HTML, CSS, and JavaScript for the front-end interface, along with a database for storing user data. The system follows a modular approach, where different components such as user input, data processing, and output display work together.

The overall flow of the system includes:

1. User registration/login
2. Data entry (symptoms, cycle, lifestyle)
3. Data storage and processing
4. Display of reports and insights

VI. SYSTEM DESIGN

The system is divided into different modules to ensure smooth functioning:

- User Module: Allows users to register and log in securely
- Tracking Module: Enables users to input health-related data
- Dashboard Module: Displays summarized information and insights
- Data Storage Module: Stores all user data in an organized manner

The system architecture is designed in a way that ensures easy navigation and efficient data handling. A simple interface is used so that users can interact with the system without difficulty.

VII. IMPLEMENTATION

The PCOD/PCOS Health Tracker is developed as a web-based application that focuses on simplicity and ease of use. The system provides a structured interface where users can securely log in and enter their health-related information, including menstrual cycle details, symptoms, weight changes, and daily lifestyle habits such as diet and physical activity. The front end of the application is designed using standard web technologies to ensure a clean and responsive user interface, allowing users to navigate different sections like the dashboard, tracking forms, and reports without confusion. On the backend, user data is stored in a database, where it is organized and maintained for future reference. The system processes this data to present it in a meaningful way, such as displaying patterns in menstrual cycles or recurring symptoms over time. The dashboard acts as the central component, summarizing all important information and helping users quickly understand their health status. Overall, the implementation focuses on creating a reliable and accessible platform that encourages regular usage and consistent health tracking.

VIII. EXPECTED OUTCOMES

The proposed system is expected to improve awareness and self-management among individuals affected by PCOD/PCOS. By providing a dedicated platform for tracking symptoms and lifestyle habits, users will be able to maintain consistent health records and observe patterns that might otherwise go unnoticed. This can help in identifying irregularities in menstrual cycles, changes in physical condition, or the impact of lifestyle choices on overall health. In addition, the system encourages users to take a more proactive approach toward their well-being. Regular tracking can lead to better understanding of personal health trends, which may support timely medical consultation when necessary. The availability of organized data also makes it easier for users to communicate their condition to healthcare professionals. Overall, the system aims to promote healthier habits, early awareness, and improved management of PCOD/PCOS.



IX. FUTURE SCOPE

The current system can be further enhanced by incorporating advanced features that improve its functionality and user experience. In the future, the application can include personalized recommendations based on user data, such as diet plans, exercise routines, and health tips tailored to individual needs. Integration with wearable devices and fitness trackers can also be added to automatically collect health data, reducing the need for manual input. Another important area of improvement is the use of data analysis and intelligent algorithms to predict health patterns and provide early warnings for potential issues. The system can also be expanded to include features such as reminders for medication, doctor appointment scheduling, and direct consultation with healthcare professionals through the platform. By continuously improving and expanding its capabilities, the PCOD/PCOS Health Tracker can evolve into a comprehensive digital health assistant for long-term condition management.

X. CONCLUSION

PCOD and PCOS are increasingly common health conditions that require continuous monitoring and proper lifestyle management. This project presents a practical solution in the form of a PCOD/PCOS Health Tracker, designed to help users systematically record and understand their health-related data. By providing a simple and organized platform, the system enables users to track menstrual cycles, symptoms, and lifestyle habits in a consistent manner. The proposed system not only supports better awareness but also encourages users to take an active role in managing their health. Regular tracking can help in identifying patterns and changes over time, which may contribute to early detection and timely medical consultation. Overall, the project highlights the importance of integrating technology with healthcare to improve daily health management. With further enhancements, this system has the potential to become a valuable tool for long-term monitoring and support for individuals.

Table1: System Modules Table

Module Name	Description
User Module	Handles user registration, login, and basic profile management.
Tracking Module	Allows users to enter menstrual cycle details, symptoms, and health data.
Lifestyle Module	Records daily habits such as diet, exercise, and sleep patterns.
Dashboard Module	Displays summarized data, trends, and user health insights.
Data Storage Module	Stores all user information securely in the database.

XI. SCREENSHOTS OF THE PROPOSED SYSTEM

The following screenshots of the PCOS and PCOS Health Tracker are included before the references section to visually present the major interfaces of the proposed system, including login, verification, dashboard, marks analysis, and communication modules.

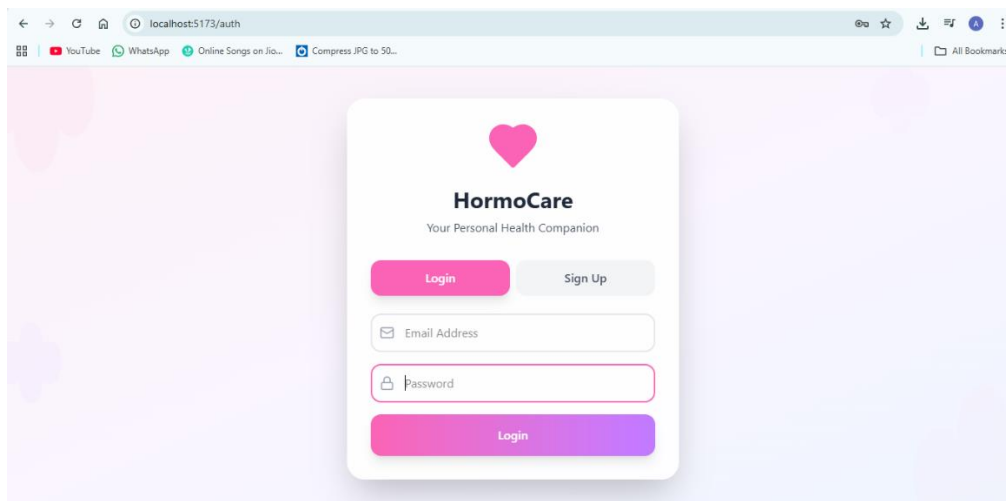


Fig. 1 Home page view of HormoCare

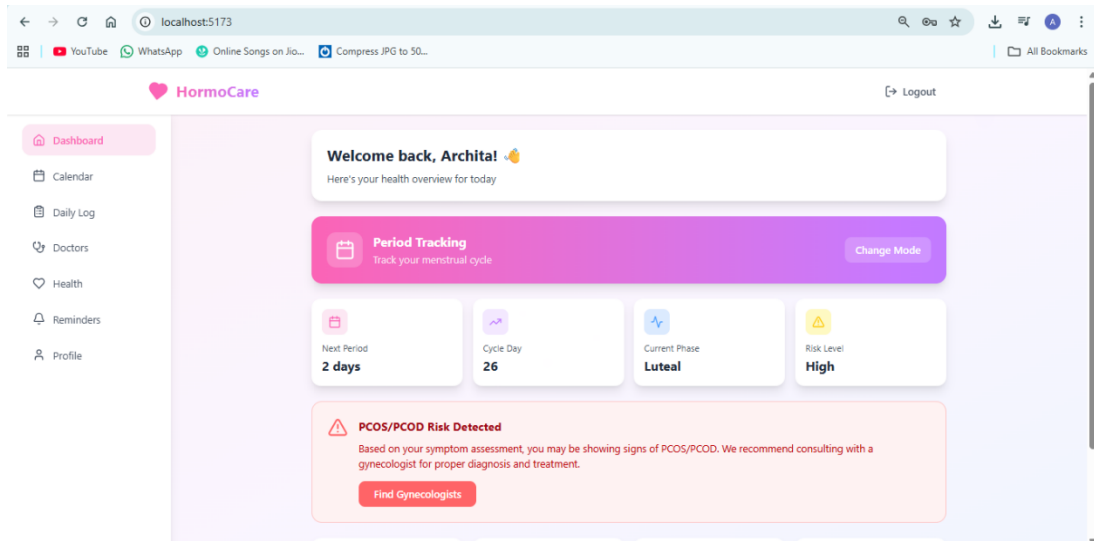


Fig. 2 HormoCare overview dashboard Fig.

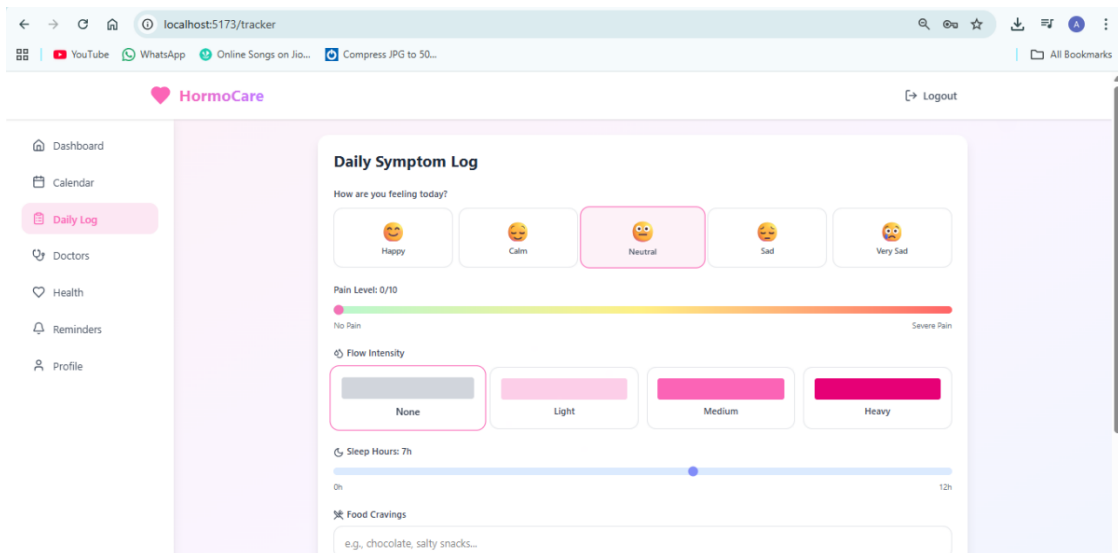


Fig.3 HormoCare Daily Symptom Log Module

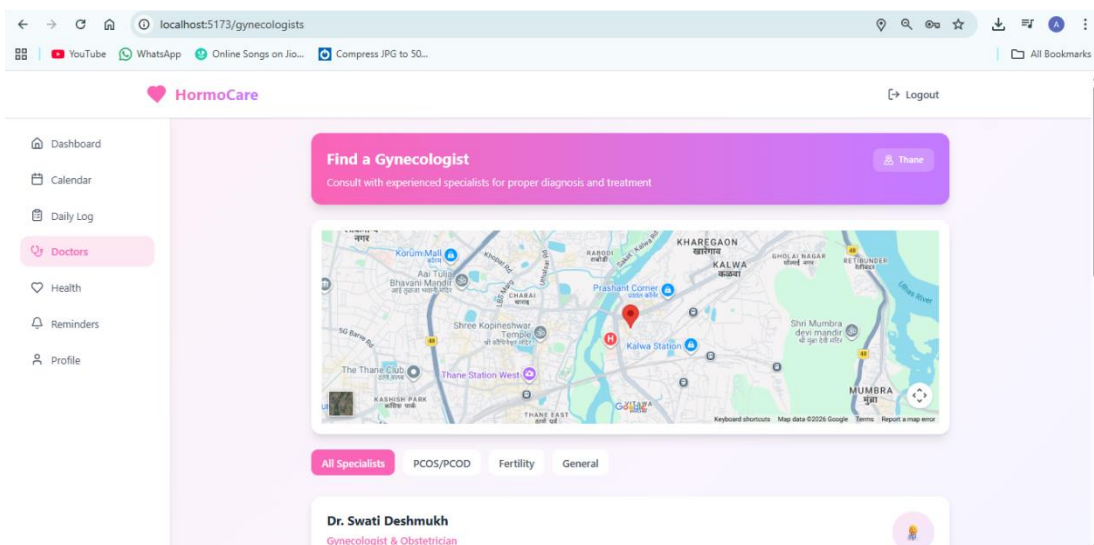


Fig.4 HormoCare Finding Doctors Module

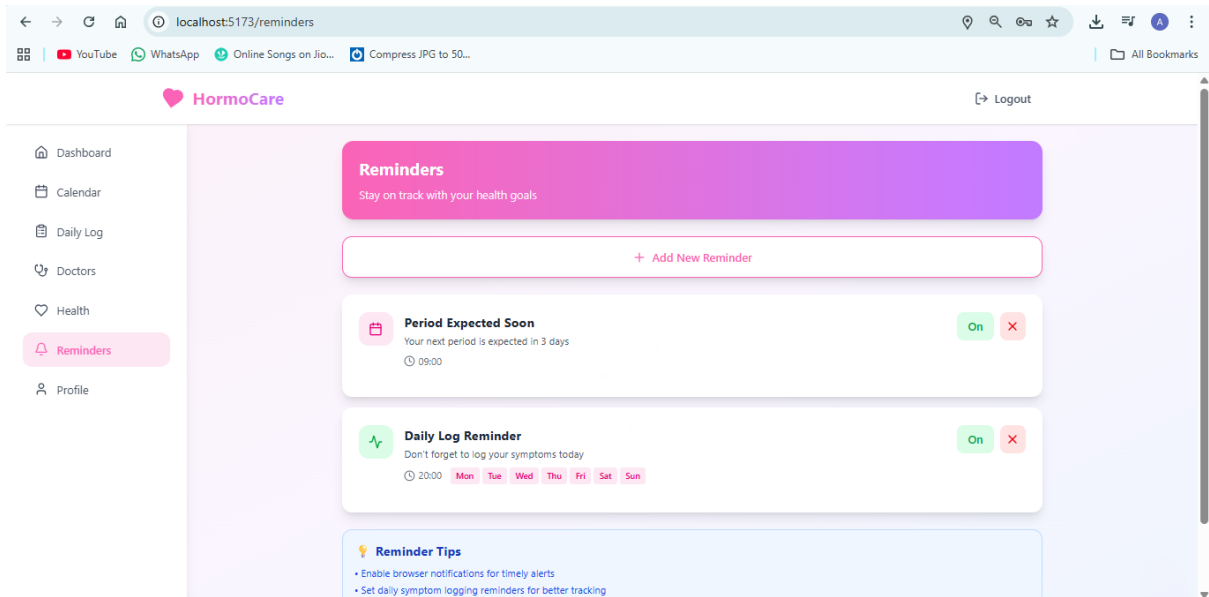


Fig.4 HormoCare Reminders Module

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