



TITLE PAGE

Domain- (No.3)Biomedical and Healthcare Management System

Problem Statement Title- Addressing the Rise of PCOS/PCOD through digital intervention

Team Name- Hack Breachers

College Name- Techno Main Salt Lake

Team Members– Sraman Ghosh, Dona Bhattacharjee, Devolina Banerjee, Pritish Kanti Datta

PCO-Guard : A Smart, Women's Wellness Tracking System

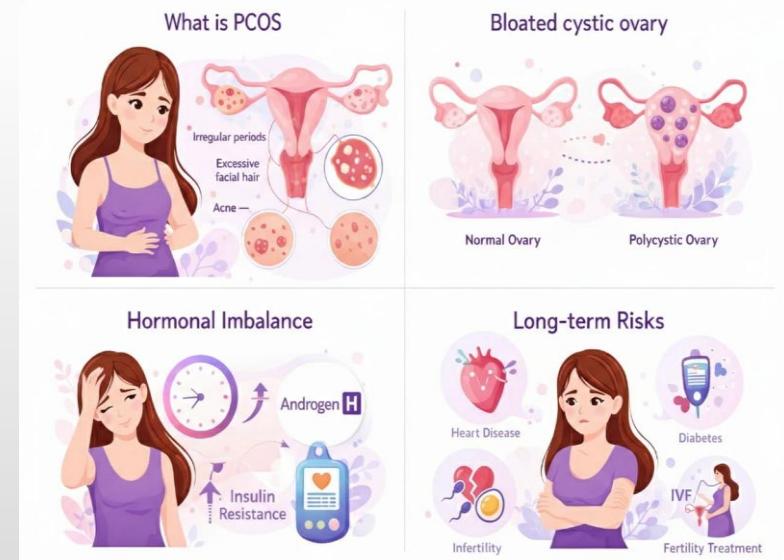
Proposed Solution:

- A comprehensive web application designed for proactive PCOS(Polycystic Ovary Syndrome) management, integrating symptom analysis and lifestyle support
- The web application addresses the fact that approximately 1 in 5 women in India are unaware or undiagnosed especially the young and reproductive-age women. The application provides AI-driven risk assessment and management tools.
- Combines menstrual tracking, AI-powered symptom risk prediction, personalized diet charts, and AI-guided Yoga modules into a single integrated platform.



PCOGuard

Platform logo



TECHNICAL APPROACH

Technology Stack & Implementation Process

- *Technologies Utilized:*
 - *Frontend : HTML 5, CSS3, and Vanilla JavaScript for a fast, responsive UI*
 - *Backend : Node.js, Express.js for efficient servers and API management*
 - *Database : SQL(MySQL/PostgreSQL) for secure and structured storage*
 - *Future AI/ML integration Python based*

Implementation Approach:

Finalizing symptom tracking parameters.

UI/UX Design : Developing a clean, accessible interface using HTML/CSS.

Core Development : Integrating Node.js logic with the SQL database for real-time data handling.

Testing : Ensuring data accuracy and responsive design.

SUBMISSION REQUIREMENTS

- ***GitHub Repository(Public)*** – <https://github.com/ARYADEV2701/PCO-Guard>
- ***Deployed Link (if available) : *Project ongoing***
- ***YouTube Demo (if available) : *Project ongoing***

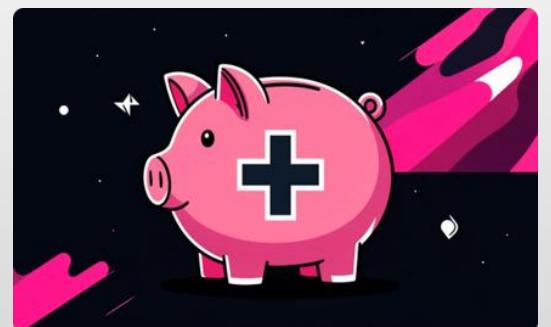
FEASIBILITY AND VIABILITY

Feasibility Assessment & Risk Mitigation

- ***Evaluating the Idea's Viability:*** Low-cost implementation leveraging in open-source libraries(React, Node, HTML, JS, SQL) and scalable cloud APIs.
- ***Identifying Challenges & Risks:*** Managing sensitive health records and ensuring high user engagement.
- ***Strategic Solutions:*** Implementing secure SQL queries to prevent data leaks and providing a user-friendly, rewarding UI.

IMPACT AND BENEFITS

- ***Health Advantage:*** Reduces long-term health risks associated with untreated PCOS through lifestyle and diet management.
- ***Social Benefits :*** Empowers women with accessible tools for early diagnosis and awareness, especially in regions with limited healthcare access.
- ***Economic advantages :*** Early intervention significantly reduces future medical and treatment expenses for the user.



RESEARCH AND REFERENCES

- ***References*** : Clinical studies on the efficiency of diet and yoga in hormonal regulation
- ***Technical Docs*** : Official documentation for Node.js and SQL Management.
- ***Health Standards*** : Research on data privacy best practices for managing digital health information