**ACM-W India, Coimbatore ACM Chapter and**

**PSG College of Technology**

**AthenaHacks - Hackathon**

**Project Proposal Outline**

**1. TEAM DETAILS**

Team Name : Ella health

College Name : PSG College of Technology

Faculty mentor name : Dr. Banu Rekha B

Faculty mail id : bbr.bme@psgtech.ac.in

Team Leader : Priyadarshini P S

mail id : 20d231@psgtech.ac.in

Mobile Number : 87784 37301

**2. INTRODUCTION**

**Project Theme:** Healthcare Innovation and Automation

**Project Title:** *Ella Health* - A women centric healthcare solution

**Motivation:** Tech-driven solutions for women’s health and wellbeing

**Problem Statement:**

Women face significant health challenges, including irregular periods, PCOD (Polycystic Ovary Syndrome), psychological issues, and lifestyle-related health concerns. These problems often lead to physical discomfort, emotional stress, and an overall decreased quality of life. However, women currently lack a centralized and user-friendly platform to track and address these issues comprehensively. There is a clear need for a dedicated women-centric health application that allows for effective monitoring, provides personalized recommendations, and offers essential information and support to help women better manage these health challenges and ultimately improve their well-being.

**Solution Proposed:**

We propose a comprehensive women's health application to empower women in managing irregular menstruation, PCOD, psychological well-being, and lifestyle issues. The app will offer tracking, personalized recommendations, educational resources, and community support to enhance women's overall well-being and autonomy in their health journey.

**Significance:**

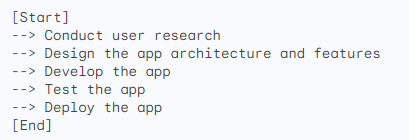
The below are the significance of the application

* 1. Menstrual Health Tracking
* 2. PCOD Management
* 3. Psychological Well-being Support
* 4. Lifestyle Guidance
* 5. Community and Support Networks

**3. PROJECT DETAILS**

| **Softwares Used** | Python, SQL, Figma, |
| --- | --- |
| **Hardware Used** | Nil |

**Flow Diagram**

****

**Different from the existing solution:**

The below are the different key features of our idea, that stand unique when compared to the existing products in the market:

* Comprehensive Women's Health Focus
* Personalization and AI
* Community and Support
* Evidence-Based Content
* User-Friendly Interface
* Data Privacy and Security
* Gamification and Motivation

**4. CONCLUSION**

In conclusion, the women-centric healthcare solution represents a pivotal step toward addressing the unique health challenges faced by women. By offering comprehensive tracking, personalized recommendations, educational resources, and a supportive community, this application not only empowers women but also improves their overall quality of life. It underscores the importance of women's health and well-being as a top priority. As we move forward, let's recognize the significance of this endeavor in advancing women's health and ensuring that every woman can take control of her health journey, fostering a healthier and more empowered future for all.

**5. REFERENCES**

[1] Urteaga, Inigo, Kathy Li, Amanda Shea, Virginia J. Vitzthum, Chris H. Wiggins, and Noémie Elhadad. "A generative modeling approach to calibrated predictions: a use case on menstrual cycle length prediction." In *Machine Learning for Healthcare Conference*, pp. 535-566. PMLR, 2021.

[2] Rego, Rosana CB. "Predictive Modeling of Menstrual Cycle Length: A Time Series Forecasting Approach." *arXiv preprint arXiv:2308.07927* (2023).

[3] Yu, Jia-Le, Yun-Fei Su, Chen Zhang, Li Jin, Xian-Hua Lin, Lu-Ting Chen, He-Feng Huang, and Yan-Ting Wu. "Tracking of menstrual cycles and prediction of the fertile window via measurements of basal body temperature and heart rate as well as machine-learning algorithms." *Reproductive Biology and Endocrinology* 20, no. 1 (2022): 1-12.

[4] Denny, Amsy, Anita Raj, Ashi Ashok, C. Maneesh Ram, and Remya George. "i-hope: Detection and prediction system for polycystic ovary syndrome (pcos) using machine learning techniques." In *TENCON 2019-2019 IEEE Region 10 Conference (TENCON)*, pp. 673-678. IEEE, 2019.

[5] Thakre, Vaidehi, Shreyas Vedpathak, Kalpana Thakre, and Shilpa Sonawani. "PCOcare: PCOS detection and prediction using machine learning algorithms." *Biosci Biotechnol Res Commun* 13, no. 14 (2020): 240-244.

[6] Mehrotra, Palak, Jyotirmoy Chatterjee, Chandan Chakraborty, Biswanath Ghoshdastidar, and Sudarshan Ghoshdastidar. "Automated screening of polycystic ovary syndrome using machine learning techniques." In *2011 Annual IEEE India Conference*, pp. 1-5. IEEE, 2011.