HormoniQ

Technical Documentation for our product: A PCOS Diagnosis and Management Tool

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Product Outline:

HomoniQ is a ML-powered diagnostic tool designed to assist in identifying, tracking, and predicting hormonal patterns related specifically to Polycystic Ovary Syndrome (PCOS).

Our goal is to provide women with personalized insights and help healthcare providers in early diagnosis and management of PCOS.

The current day problem

Hormonal and menstrual-related conditions like PCOS are often underdiagnosed or misdiagnosed due to overlapping symptoms and complexities.

There are many inefficiencies in current approaches to making diagnoses. What's even more pressing is the fact that late diagnoses lead to many health issues like infertility, metabolic syndrome and even worsened mental health. Many doctors rely on basic symptom diaries, which lack nuance in tracking cyclical changes.

Our product's pattern analysis across menstrual phases can support earlier detection.

Solution Overview

How It Works:

1. Collects and uses existing menstrual and health data from EMRs (cycle length, symptoms, hormone levels, blood test results, weight, BMI).
2. Uses ML to detect symptom anomalies and flags urgent cases.
3. Provides a percentage of the likelihood of having PCOS - is a relevant insight as a pre-diagnosis preliminary tool for healthcare providers

Program:

Our ML Algorithm uses a Random Forest Classifier that trains on menstrual data to classify and predict high-risk PCOS patterns. Our Confusion Matrix analysis measures the accuracy of predictions to ensure reliability.

Revenue Model and Market

Our target audience currently is women in the range of ages 15-55, particularly those with PCOS or hormonal health concerns, and healthcare providers. We also have potential for licensing to clinics and hospitals for a wider impact. Our revenue model would essentially be freemium: free, but with premium features for in-depth reports and insights. Women's digital health market is expanding, increasing adoption and investment.