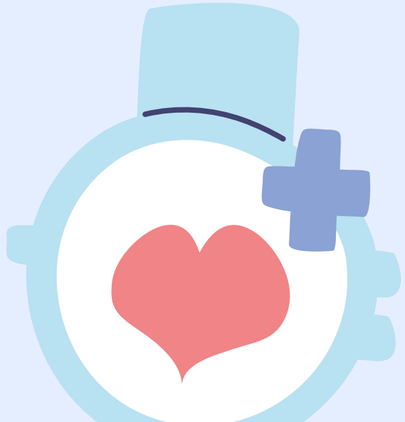
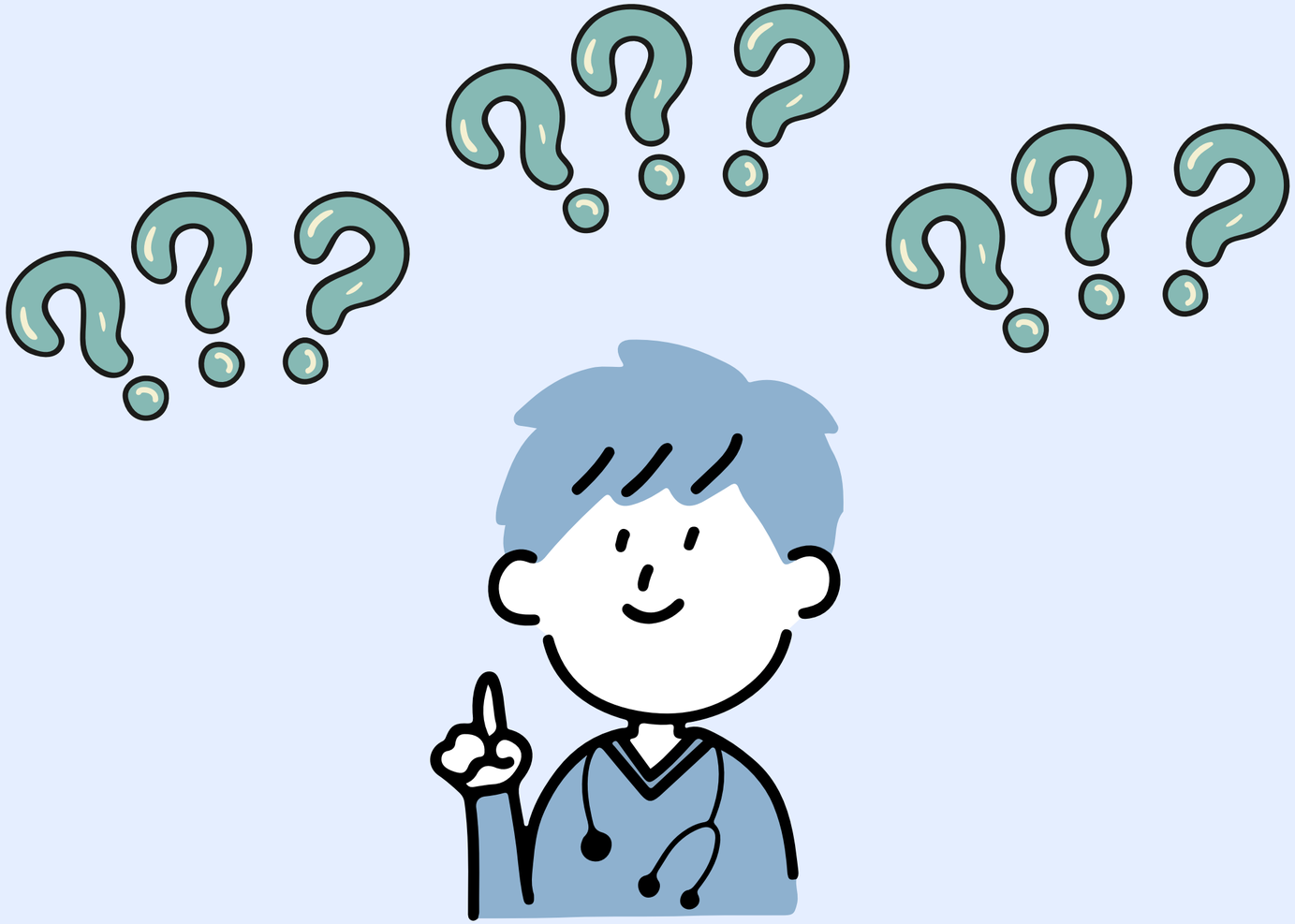
Predicting Heart Attack Risk

Don’t Guess the Signs.
Predict, Prevent, Protect.



By Nikhar Bhavsar

Who am I??



Heart Disease: A Leading Cause of Death in Canada

According to Public Health Canada

Heart disease is the second leading cause of death in Canada, accounting for over 50,000 deaths annually.

1 in 3 cases go undiagnosed until severe symptoms occur.

Why is Early Detection Challenging?

Doctor Shortages

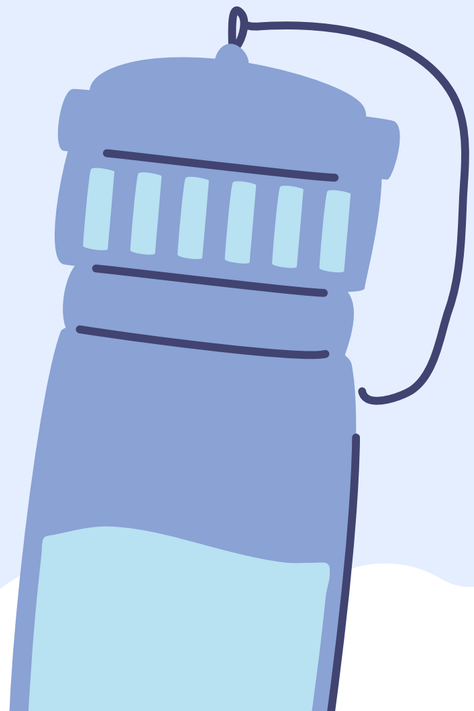
4.7 million Canadians lack a family physician (Statistics Canada 2023).

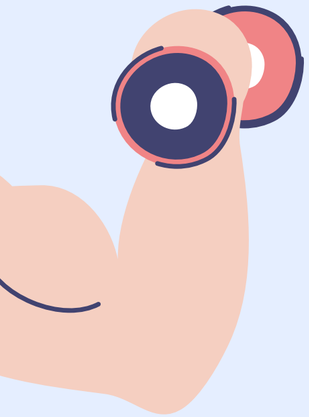
Limited Awareness

Early warning signs like high blood pressure or cholesterol are often ignored.

Testing Gaps

Rural and remote communities lack access to diagnostic facilities.



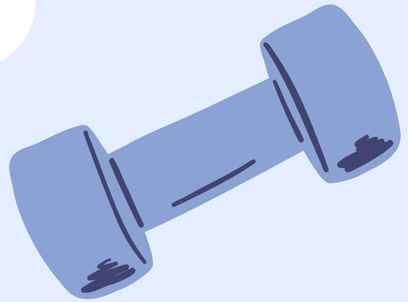


Proposed Solution

Early Risk Assessment with Machine Learning

- Analyzes health data to predict heart disease risk.
- Factors considered: Diabetic, Physical Active, BMI, etc.
- Alerts users to seek medical attention before severe symptoms arise.

Early detection can reduce healthcare costs and save lives.



How it Works!!

1

User provides 12 simple health inputs

- age, sleep hours, physical activity, diabetes etc.

2

ML model analyzes the data

- Trained on thousands of real patient records using a technique called Random Forest, which is excellent for detecting patterns.

3

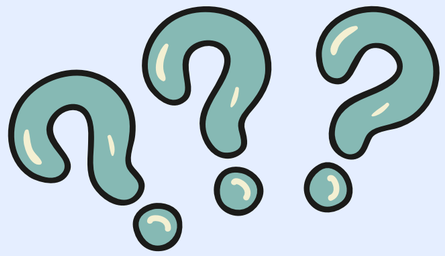
Prediction: Risk Level Output

- The model returns Low, Moderate, or High Risk for heart attack.

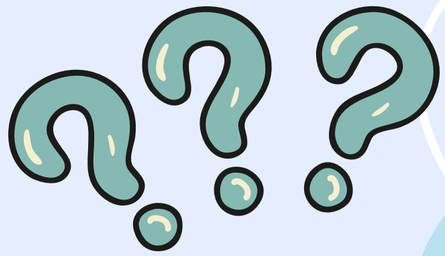
Demo Time

Next Steps:

1. Add explainability (NLP to explain results in plain language) so users know why they are at risk
2. Improve precision to reduce false alarms
3. Expand dataset to improve diversity and generalizability



Questions



Thank You!