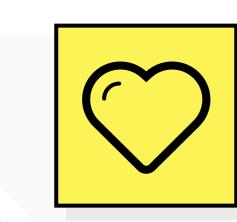
<u>Disease Prediction Using Machine Learning</u>



WHO are we empathizing with?

Who is the person we want to understand? What is the situation they are in? What is their role in the situation?

Low-

Income

Individuals:

Medical **Students**

Patient who cannot afford to consult doctor

Privacy Concerns:

privacy and security of

personal health data

Varied Experiences:

models vary, with

some users finding

them helpful, while

others have doubts

about their accuracy

and reliability.

periences with these

when using these models.

People who live in remote areas

Medical Researchers Medical

Professionals

Frequent/

Cruise Ship

Passengers



International

Travelers

What do they THINK and FEEL?

GOAL



What are they hearing others say? What are they hearing from friends? What are they hearing from colleagues? What are they hearing second-hand?

stories of accurate early interventions

Need for Professional

Confirmation:

Conversations may

highlight the importance of consulting healthcare professionals to validate

the model's predictions.

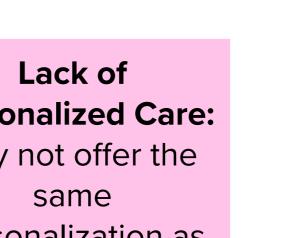
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What do they HEAR?

Educational Value: Users might emphasize the educational aspect, mentioning that these models have helped them become more

informed about health and medical conditions.

What are their fears, frustrations, and anxieties?



Personalized Care: May not offer the personalization as professional healthcare.

Accuracy **Concerns:** Varying accuracy levels can result in false positives or negatives.

Lack of Physical Examination: Models cannot replace the physical examination and feedback a doctor provides.

Technological Barriers: Inaccessible to individuals without internet access or technology literacy.

Algorithm Bias: May inherit biases present in training data, leading to potential disparities in healthcare outcomes.

User Trust Concerns: Users may have concerns or doubts about the reliability, accuracy, impacting their willingness to rely on it for health guidance.

Misdiagnosis: May not consider rare or unusual conditions. leading to potential misdiagnosis.

PAINS

User Dependency: Over-reliance on these models can lead to individuals neglecting traditional healthcare check-ups and consultations with medical professionals

Limited Scope: Models may not **Cost Reduction: Early Detection:** Detect diseases healthcare costs at an early stage

prevention and treatment. early intervention.

Quick **Assessments:** Provide rapid assessments especially in emergencies

Medical Education: Disease prediction models using symptoms serve as /aluable educational tools for medical

students.

Decision Support: Healthcare professionals can use the models for more accurate and timely diagnoses

GAINS

Reduce

through

Remote Areas:

Particularly

beneficial for

individuals in

remote or isolated

areas with limited

healthcare access.

What are their wants,

needs, hopes, and dreams?

Accessible 24/7:

These models are

available round the

clock, offering

healthcare

guidance at any

Scalability: Can be

scaled to serve

large populations,

making healthcare

guidance more

accessible.

Research: Medical

researchers use the

data generated by

these models for

disease studies and

model

improvement.

What do they need to DO?

the platform for non-

purposes, users are

encouraged to engage

with respect, empathy,

health and support.

and a genuine focus on

What do they need to do differently? What job(s) do they want or need to get done? What decision(s) do they need to make? How will we know they were successful?

Provide Feedback:

Encourage users to provide feedback about their experience with the model, so that we can make continuous improvements in the model.

To prevent the misuse of serious or inappropriate

Report Issues: Users should report any inappropriate content or behavior of the model

community.

Registration:

Users must sign up

and create a profile

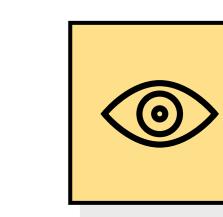
to participate in the

Stay Informed About **Updates:** Keeping up with updates, new features and changes in model guidelines ensures effective use of the platform.

They read reviews and ratings of healthcare providers, services, or products to gauge the experiences of others.

In their immediate environment, users see local healthcare facilities, air quality, weather conditions

In the marketplace, people may notice others not taking necessary precautions or adopting certain behaviors related to health and well-being.

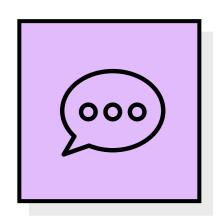


What do they SEE?

What do they see in the marketplace? What do they see in their immediate environment? What do they see others saying and doing? What are they watching and reading?

Regulatory Bodies: We need to establish clear guidelines for the ethical use of ML is disease prediction.

Patients: concerned about privacy; how the health information s being used in the prediction process



What do they SAY?

What have we heard them say? What can we magine them saying?

Patients: Detailed explanations for the predictions to understand the reasoning behind them.

Regulatory Bodies:

We need to establish clear guidelines for the ethical use of ML in disease prediction.

Healthcare **Professionals:** ML can assist us in analyzing vast datasets and identifying patterns that may not be apparent manually.

What other thoughts and feelings might influence their behavior?

Fear and **Anxiety:** Alarming predictions can lead to fear and anxiety,

Empowerment: Feeling empowered by the model can make users more proactive in managing their

health

Cultural Beliefs: Cultural beliefs and practices can influence how users interpret and respond to the model's recommendations.

cover all

possible

diseases and

conditions

Technological **Mistrust:** A general mistrust of technology can make some users hesitant to rely on

these models.

Privacy Concerns: Worries about data privacy and security may make users cautious about using the model.

What do they DO?

What do they do today? What behavior have we observed? What can we imagine them doing?

Frequent online searches for healthrelated topics. Engage in preventative health measures like exercising or dietary changes.

Search for information: Users may research online to gather information about their symptoms, potential diseases, and treatment options.

Share personal data: Users may provide their medical history and personal information when interacting with the model.

Trust the machine learning model: Users may rely on the model's predictions and recommendations for early disease detection.

Take proactive measures: Users could adopt healthier lifestyle choices if the model predicts higher disease risk.