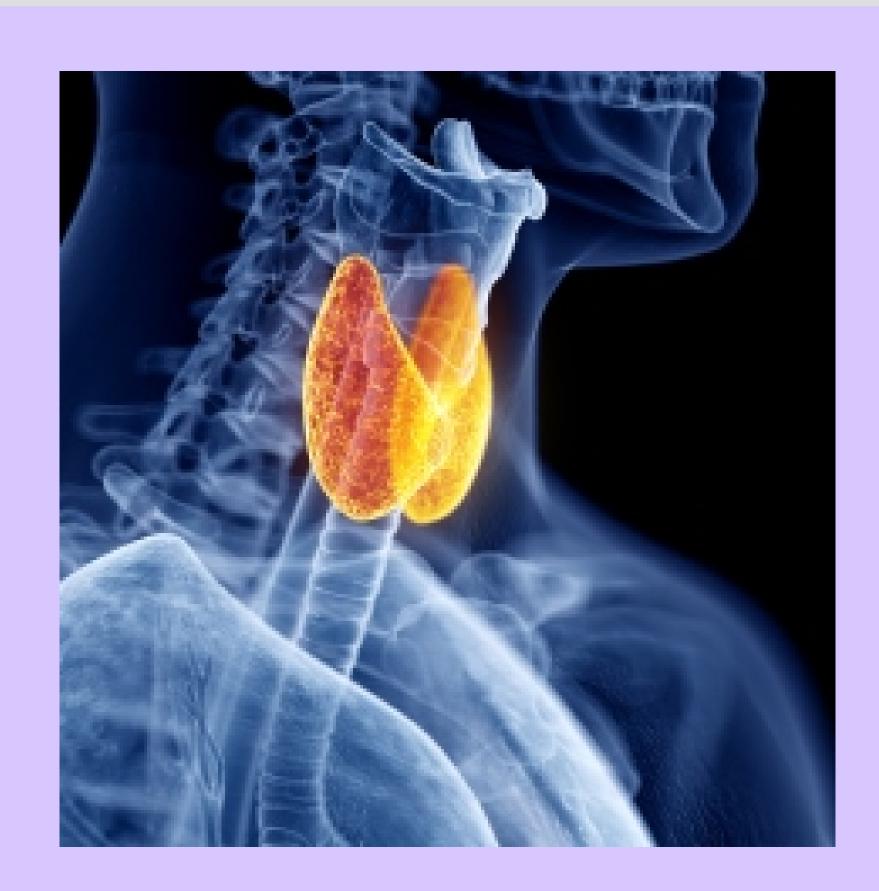


# Brainstorm & idea prioritization

# Thyroid Disease Classification Using Machine Learning

- (L) 10 minutes to prepare
- **1 hour** to collaborate
- **2-8 people** recommended





### Before collaborate

This project present thyroid disease prediction using various machine learning algorithms based on the 10 minutes atributes to obtain high accuracy.

# Team gathering

Totally, Four participation are there in this session . we invite members through mural link and gathered in this session.

#### **Set the goal**

This project present thyroid disease prediction using various machine learning algorithms based on the atributes to obtain high accuracy.

#### Learn how to use the facilitation tools

Facilitation tools can be very helpful for guiding discussions and brainstorming sessions.

Open article -



#### **Problem statement**

1.The Thyroid Disease can be easily identify based on symptoms in the patient's history.

#### **5** minutes

- 2. Thyroid disease is a medical condition that affects the function of the thyroid gland
- 3. This project present thyroid disease predction using various machine learning algorithms based on the atributes to obtain high accuracy
- 4.That dataset create for this project is apply from the kaggle thyroid disease dataset.
- 5.The important of feature show be estimated to select the option number of features thyroid disease classification.



# Brainstorm

Here some ideas

**①** 10 minutes

Person 1		Person 2		Person 3		Person 4	
Hardware Requirement are used	16 GB of RAM is used	Machine Learning algorithms are used	SVM algorithms is used	Google colab is used for create,share and run the programs	XGB classifier is used		Random forest algorithms are used
use the machine learning to identify the diiffrent types of thyroid	Artificial neural networks are used	Python Libraries are imported	python language is used to build accuracy of thyroid disease	Operating system is required	Internet and storage are needed	Build a HTML pages	Thyroid disease dataset is used



# Group ideas

- 1.Hardware Requirements are used.
- 2.Google colab is used for create, share and run the programs.
- 3.Machine learning algorithms are used such as, XGB classifier, ANN,SVM and Random Forest Algorithm.

  O 20 minutes
- 4.Python Language is used to build accuracy of thyroid disease. 5.Thyroid disease dataset is used.

# Hardware 16 GB of

Hardware 16 GB of Requirement RAM is are used used

Python

python
language is
used to build
accuracy of
thyroid disease

Dataset

Google Colab

Thyroid

Google col

Google colab
is used for
create,share
and run the
programs

Machine Learning Algorithms

XGB classifier is used

disease

dataset is

used

Artificial neural networks are used

SVM algorithms is used Random forest algorithms are used



# Prioritize

Prioritize the ideas

① 20 minutes





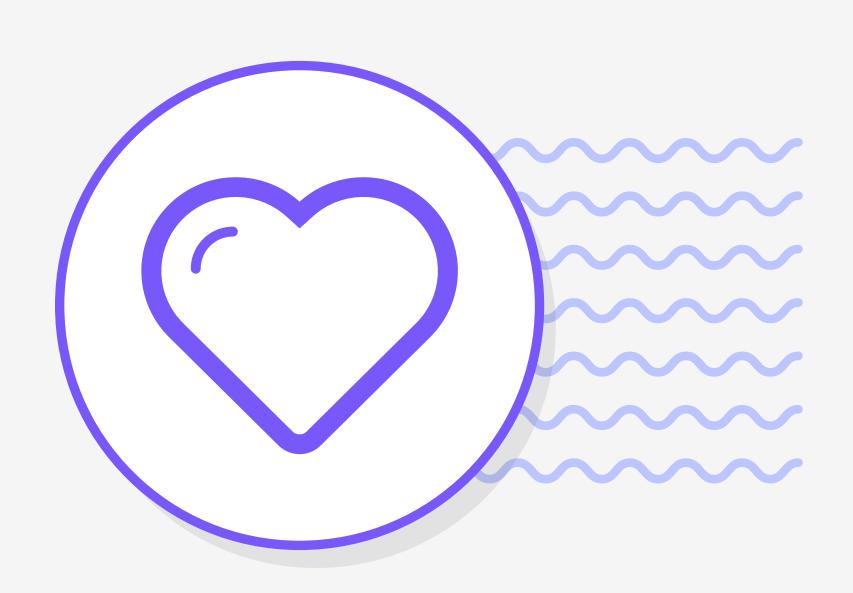
## Feasibility

Regardless of their importance, which tasks are more feasible than others? (Cost, time, effort, complexity, etc.)



## After collaborate

we can export the mural as pdf to share. It is helpful to getting information.



# Empathy map canvas

Empathy map canvas for Thyroid disease classification using machine learning

Originally created by Dave Gray at

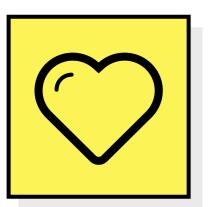


**Share template feedback** 



# Develop shared understanding and empathy

Summarize the data you have gathered related to the people that are impacted by your work. It will help you generate ideas, prioritize features, or discuss decisions.



What do they HEAR?

What are they hearing others say?

What are they hearing from friends?

What are they hearing second-hand?

The patient

life style

factors that

may impact

thyroid

function

What are they hearing from colleagues?

#### 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?

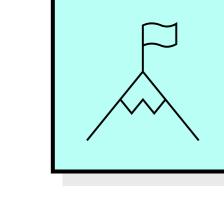
and wellbeing

Individuals who are affected by thyroid disease my be 3 experiencing a variety of symptoms that can affect overall health

**GOAL** 

#### What do they need to DO?

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?



Accurate

and timely diagnosis of thyroid disease

It can be challenging due to its many subtypes and overlapping symptoms

Patients with a wide range of symptoms ,including fatigue ,weight gain/loss ,hair loss and mood changes

What do they THINK and FEEL?

**PAINS** 

What are their fears, frustrations, and anxieties?

Healthcare

professionals may

struggle to

differentiate

between different

types of thyroid

disease based on

symptoms alone

They may also

face challenges

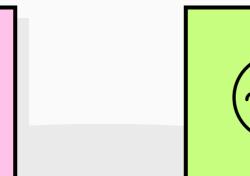
in interpreting

test results

,which can be

affected by a

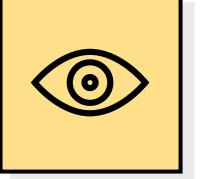
range of factors



**GAINS** 

What are their wants, needs, hopes, and dreams?

> Medical records and diagnostic tests that provide data on the patient's thyroid function and potential



abnormalites

## 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?

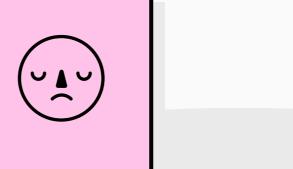


#### What do they SAY?

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

symptoms can be frustrating

> Treatment can make a big diffrence



(~<u>\</u>

of symptoms and medical histories for impact thyroid function

Patient reports

Feedback from colleagues and patients about the accuracy and diagnostic tools

and protocols

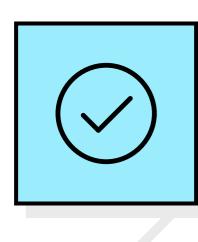
Access to effective and affordable medications to manage their symptoms

> Access to specialists such as endocrinologists, who can provide expert care for thyroid disease

What other thoughts and feeling\$ might influence their behavior?

Fear :The person may be afraid of the implications of their diagnosis ,which could affect their behavior and decision making

Hopelessness: some people may feel hopeless about their condition



#### What do they DO?

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

Healthcare professionals use their training and experience to evaluate patient symptoms and diagnose thyroid disease

They may use a variety of tools and techniques, such as physical exams, blood tests , imaging and biposise to gather data

They may consult with colleagues or specialists to confirm a diagnosis or explore treatment option



