

IDEATION AND BRAINSTORMING

1

Define your problem statement

How we can make reading chest X-RAY scans easier and in a more time and cost efficient manner for the general public.

🕒 5 minutes

PROBLEM

How we can make reading chest X-RAY scans easier and in a more time and cost efficient manner for the general public.



Key rules of brainstorming

To run an smooth and productive session

- Stay in topic.
- Encourage wild ideas.
- Defer judgment.
- Listen to others.
- Go for volume.
- If possible, be visual.

2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

🕒 10 minutes

TIP

You can select a sticky note and hit the pencil (switch to sketch) icon to start drawing!

GATIK

Utilize CNN architectures optimized for image recognition.

Use Fine-tune pre-trained models

Combine multiple deep learning models to improve overall performance and robustness.

VINIT

Apply techniques like rotation, flipping, zooming, and cropping to increase the diversity of the training data.

Implement attention mechanisms to highlight relevant regions of the X-ray images for classification.

Apply Multi-Modal fusion

SHIKHAR

Utilize a combination of labeled and unlabeled data to improve model performance.

Generate heatmaps to visualize which regions of the X-ray are most relevant for the model's prediction.

Analyze a series of X-rays over time to track the progression of the disease

SHANKAR

Verify results with local doctors and clinics to ensure reliability.

Consider subclassifying COVID-19 into different severity levels or stages for more detailed diagnosis.

Validate the model on multiple datasets from different sources to ensure its generalizability.

3

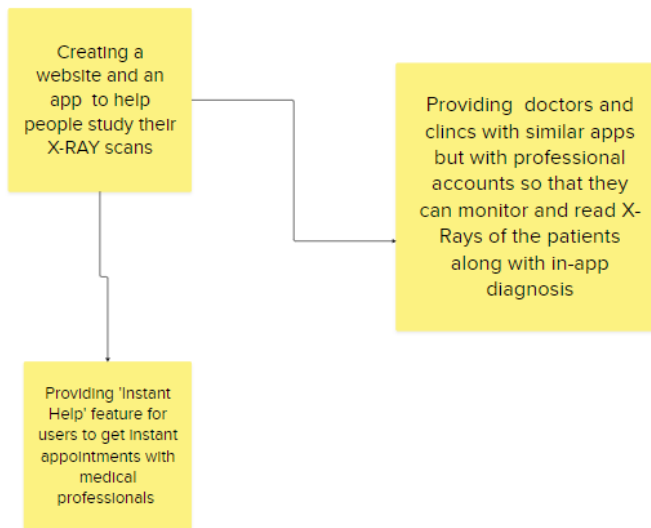
Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

⌚ 20 minutes

TIP

Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.



4

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

⌚ 20 minutes

TIP

Participants suggest their cursors to point to where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the H key on the keyboard.

