

## Ideation Phase

### Brainstorm & Idea Prioritization Template

Date	15 june 2025
Team ID	LTVIP2025TMID43877
Project Name	GrainPalette A Deep Learning Odyssey In Rice Type Classification Through Transfer Learning
Maximum Marks	4 Marks

**Brainstorm & Idea Prioritization Template:** Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions. Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

Reference: <https://www.mural.co/templates/brainstorm-and-idea-prioritization>

#### Step-1: Team Gathering, Collaboration and Select the Problem Statement

The screenshot shows the first step of the template. It features a light gray header with a blue circular icon containing a lightbulb and wavy lines. Below the header, the title "Brainstorm & idea prioritization" is displayed in bold. A sub-instruction reads: "Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room." At the bottom of this section, there are three time-related icons: a clock (10 minutes to prepare), a person (1 hour to collaborate), and a group (2-8 people recommended).

The main content area is divided into two columns. The left column, titled "Before you collaborate", contains a brief introduction and three steps: "Team gathering", "Set the goal", and "Learn how to use the facilitation tools". Each step includes a small icon and a brief description. The right column, titled "Define your problem statement", shows a box labeled "PROBLEM" with the placeholder text "How might we [your problem statement]?" followed by a "Key rules of brainstorming" box listing six rules with corresponding icons.

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## Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

⌚ 5 minutes

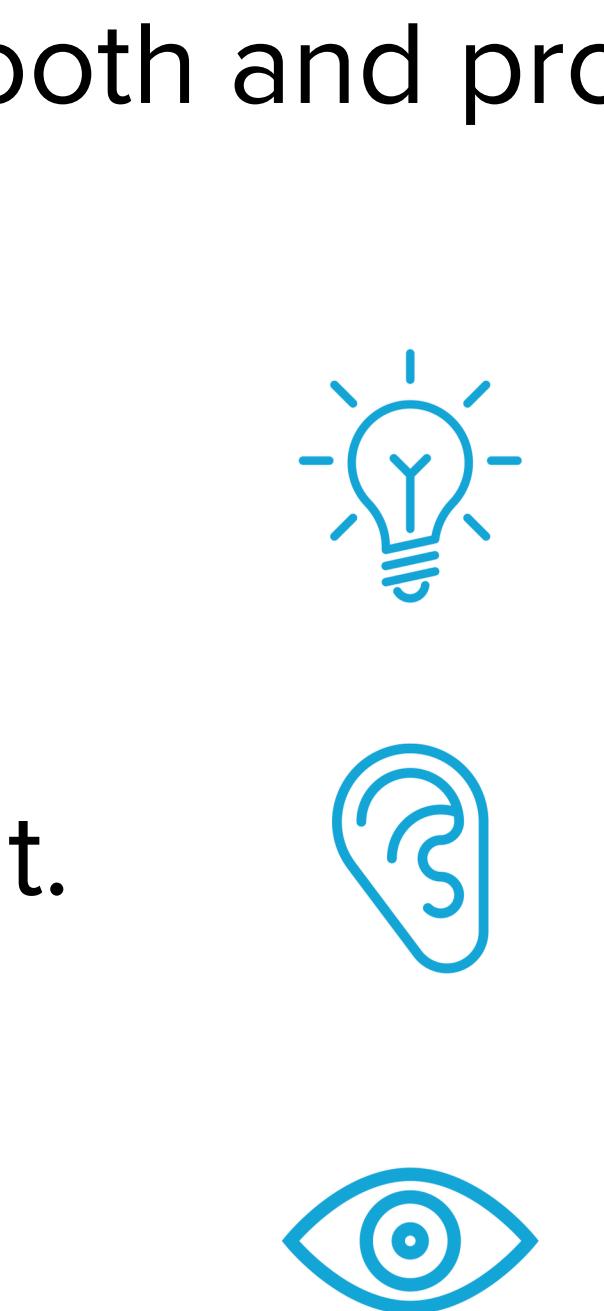
### PROBLEM

How might we make accurate rice

type identification affordable and

accessible to all farmers, regardless

of their resources?



### 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.

## 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!

### Kunal Goel

Improve the offline mode so it can do more processing locally, even if the initial model download needs internet.

Allow farmers to anonymously contribute rice grain images to a community dataset to improve model accuracy over time.

Add support for more local languages beyond just the most common ones.

Include short videos or guides within the app explaining rice types and farming practices.

Make the image capture process a little game to teach farmers how to take good pictures for accurate AI analysis.

Allow farmers to anonymously contribute rice grain images to a community dataset to improve model accuracy over time.

### Ayush Mishra

After rice type prediction, show current market prices for that rice type in local markets.

Investigate if there are even more efficient, open-source transfer learning models we could use to reduce app size and processing needs.

Make the app interface extremely basic with large icons, minimal text – think grandpa-friendly!

Explore partnerships with mobile network providers to offer discounted data packs specifically for agricultural apps like ours.

Create a simplified, smaller app version that uses less data and works better on basic smartphones.

Collect and share success stories from farmers who have used GrainPalette and seen positive results to build trust and encourage adoption.

### Aashish Kumar Chetan

Offer a basic free version with limited daily predictions, and a premium subscription for unlimited use and extra features.

Actively pursue government grants or subsidies for agricultural technology initiatives to make the app free or heavily discounted for farmers.

Partner with local agricultural content creators (YouTubers, bloggers, etc.) to promote the app in regional languages and styles.

In very resource-poor areas, explore partnerships to offer extremely basic, low-cost smartphones pre-loaded with the GrainPalette app.

Set up a system for automatically retraining the AI model with new farmer-contributed data to keep improving accuracy over time.

Make the app show a "confidence score" for each prediction, so farmers know how certain the AI is.

### Abhijeet Singh Adhikari

Partner with agricultural NGOs who work directly with farmers to distribute the app and provide training.

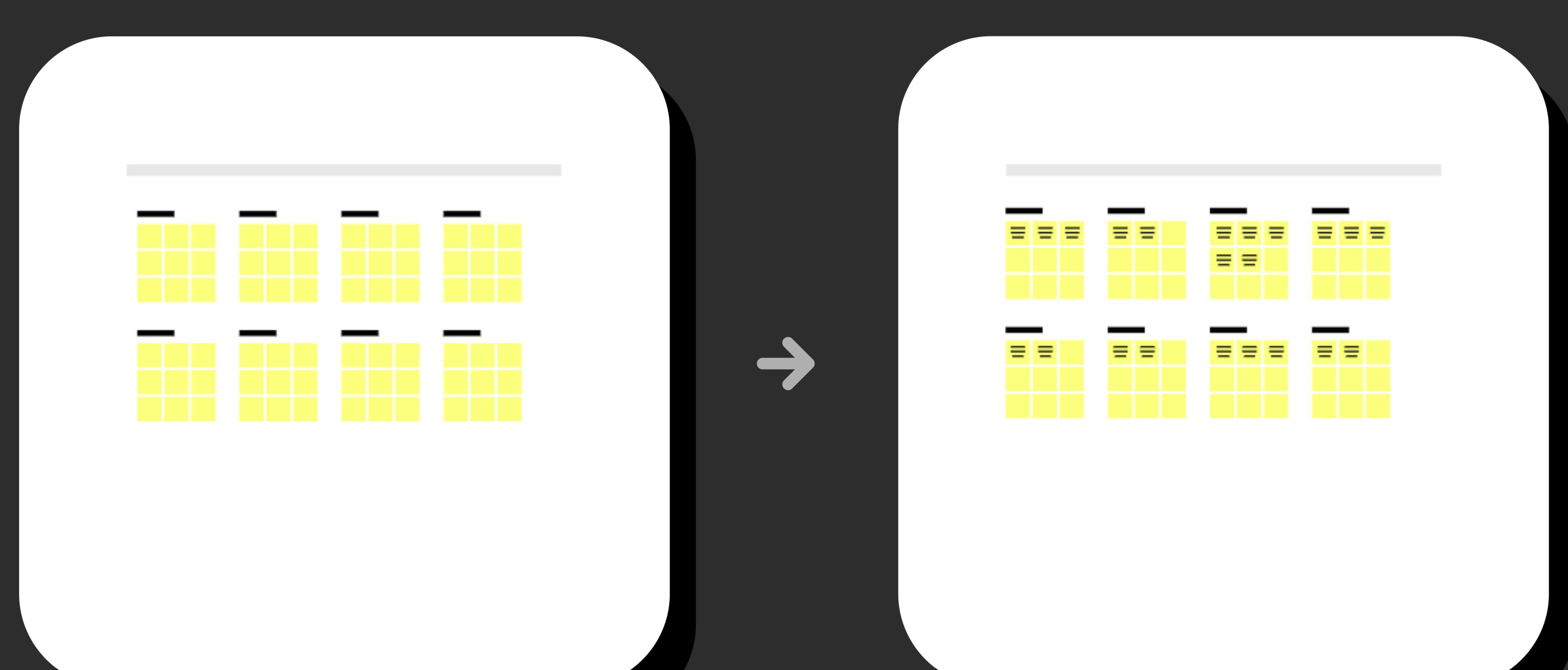
Direct button in the app to connect to a human agricultural expert for more complex questions (maybe a paid premium feature, or limited free initial consultations).

Instead of just MobileNetV4, experiment with combining multiple transfer learning models for potentially higher accuracy (but might increase complexity).

Easy way for farmers to report if the prediction was wrong and ideally, provide the correct rice type, to use as error correction data.

Provide downloadable guides (PDF or video) on how to collect and photograph rice grains for best AI analysis.

Collaborate with fertilizer/seed companies to bundle app access with their products.



## 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.

### Enhancing Core App Functionality & AI

Improve the offline mode so it can do more processing locally, even if the initial model download needs internet.

Investigate if there are even more efficient, open-source transfer learning models we could use to reduce app size and processing needs.

Allow farmers to anonymously contribute rice grain images to a community dataset to improve model accuracy over time.

Instead of just MobileNetV4, experiment with combining multiple transfer learning models for potentially higher accuracy (but might increase complexity).

Set up a system for automatically retraining the AI model with new farmer-contributed data to keep improving accuracy over time.

Easy way for farmers to report if the prediction was wrong and ideally, provide the correct rice type, to use as error correction data.

### Simplifying User Experience & Providing Guidance

Provide downloadable guides (PDF or video) on how to collect and photograph rice grains for best AI analysis.

Include short videos or guides within the app explaining rice types and farming practices.

Make the app interface extremely basic with large icons, minimal text – think grandpa-friendly!

Make the image capture process a little game to teach farmers how to take good pictures for accurate AI analysis.

Make the app show a "confidence score" for each prediction, so farmers know how certain the AI is.

### Strategic Partnerships & Distribution

In very resource-poor areas, explore partnerships to offer extremely basic, low-cost smartphones pre-loaded with the GrainPalette app.

Explore partnerships with mobile network providers to offer discounted data packs specifically for agricultural apps like ours.

Partner with agricultural NGOs who work directly with farmers to distribute the app and provide training.

Actively pursue government grants or subsidies for agricultural technology initiatives to make the app free or heavily discounted for farmers.

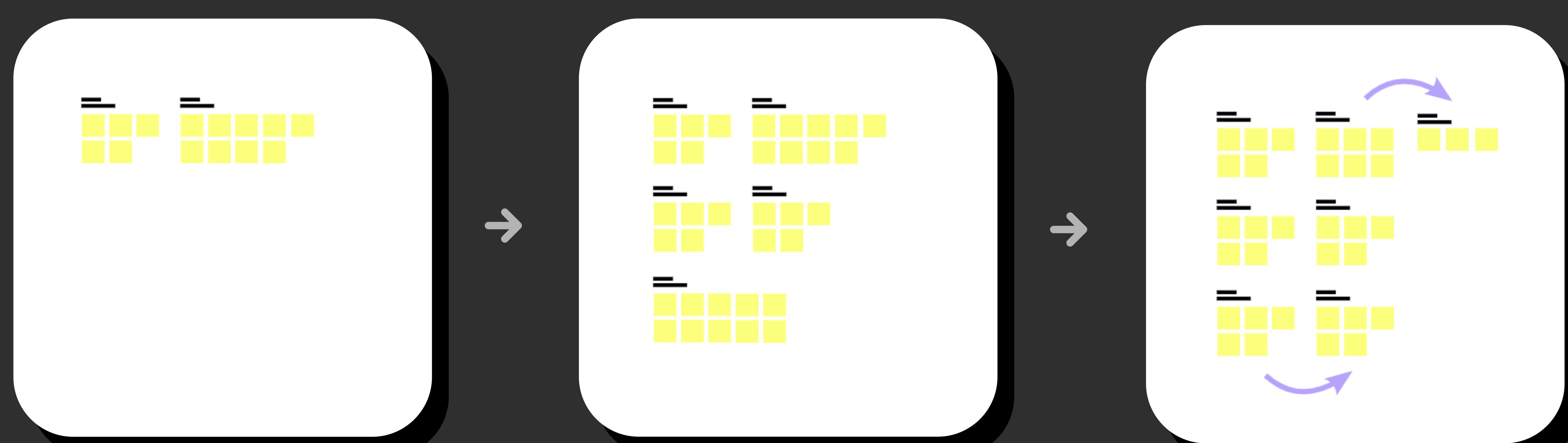
### Adding Farmer Value & Practical Features

Add support for more local languages beyond just the most common ones.

Direct button in the app to connect to a human agricultural expert for more complex questions (maybe a paid premium feature, or limited free initial consultations).

Offer a basic free version with limited daily predictions, and a premium subscription for unlimited use and extra features.

After rice type prediction, show current market prices for that rice type in local markets.



## 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 can use their cursors to point at 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.

