# Emphasize and discover
# Smart Sorting: Transfer Learning for Identifying Rotten Fruits and Vegetables

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**Empathy Map Canvas:**

An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviours and attitudes.

It is a useful tool to helps teams better understand their users.

Creating an effective solution requires understanding the true problem and the person who is experiencing it. The exercise of creating the map helps participants consider things from the user's perspective along with his or her goals and challenges.

**Problem Statement:**

In the agricultural and food industries, ensuring the freshness and quality of fruits and vegetables is essential but highly dependent on manual inspection. This process is time consuming, inconsistent, and prone to human error, especially under pressure or fatigue.

Our project, Smart Sorting, uses transfer learning and image recognition techniques to identify and classify rotten fruits and vegetables accurately. By leveraging pre-trained deep learning models, the system automates quality control tasks in food processing plants, supermarkets, and smart homes. This not only improves operational efficiency but also significantly reduces food waste and enhances consumer satisfaction.

**EMPATHY MAP: Smart Sorting: Transfer Learning for Identifying Rotten Fruits and Vegetables**

# GOAL

**WHO are we empathizing with?**

- The **Quality Control Manager** at a food processing plant.
- Responsible for ensuring only fresh fruits and vegetables are packaged and shipped.
- Working under pressure with a large volume of produce to inspect daily.

**What do they need to DO?**

- Implement a faster, more reliable inspection method.
- Reduce dependency on manual labor for quality control.
- Ensure only fresh items are packaged and shipped.
- Adopt smart, scalable solutions (like AI/ML).

What do they THINK and FEEL?

**PAINS**

- Fear of quality failure and customer complaints.
- Frustration with slow, inaccurate inspections.
- Anxiety about large shipment deadlines.
- Tired of repetitive manual supervision.

**GAINS**

- Hope to reduce food waste and save costs.
- Desire for efficient, automated sorting.
- Motivation to adopt smart tech and AI.
- Satisfaction when customer feedback is positive.

**What do they HEAR?**

- "Hurry up with the inspection, the next batch is coming in!"
- "Why is this taking so long?"
- "We're getting complaints about rotten produce."
- "Other companies are automating this already."

**What do they SEE?**

- Huge volumes of fruits and vegetables arriving for sorting.
- Workers manually inspecting items.
- Some spoiled produce slipping past the manual checks.
- News/articles about AI automation in agriculture.

**What do they DO?**

- Supervise workers on sorting lines.
- Monitor quality and safety reports.
- Address feedback from retail clients.
- Try to reduce errors under time constraints.

**What do they SAY?**

- "This process needs to be faster and more accurate."
- "We can't afford to ship bad produce."