Empathy map canvas

Deep Learning Model For Detecting Diseases In Tea Leaves

Originally created by Dave Gray at

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Deep Learning Model For Detecting Diseases In Tea Leaves

Tea leaf disease detection employing deep learning technology provides a streamlined approach for farmers to spot diseases in their early stages. With a simple step of capturing a picture of a leaf and feeding it to the model, the system swiftly identifies any disease present. This proactive approach empowers farmers to take timely action in treating the disease, resulting in cost savings and the remarkable improvement of tea leaf production quality.

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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?

Tea Farmers are the individuals who cultivate tea plants.

Agricultural Experts particularly those with knowledge of tea plant diseases

GOAL

Need access to knowledge and resources for disease prevention and management.

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?

Need access to knowledge and resources for disease prevention and management.

Need to monitor their tea plants regularly to detect signs of disease early.

Daily changes in the growth and health of their tea crops

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

Local news and discussions about disease outbreaks in tea crops

Hear advice on disease prevention and management techniques from Agricultural experts

Hear updates on the latest scientific findings and advancements on Tea leaf disease prevention

Workshops, training, and educational programs related to tea crop diseases

Hear the real-world observations and challenges faced by fellow tea farmers.

What do they THINK and FEEL?

PAINS
What are their fears, frustrations, and anxieties?

The constant worry about their crops getting sick can be very unsettling for them

The financial burden of purchasing pesticides and treatments might be a concern.

Disease management often requires intensive labor, which is an extra financial burden

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

Farmers might feel relieved if they can detect diseases early and save their crops. Improved yields,

Efficient disease detection automation saves farmers time, allowing them to allocate their time and efforts to other essential task

With early detection and targeted treatment, farmers can reduce the need for excessive use of pesticides and resources

What other thoughts and feelings might influence their behavior?

Observations of fellow farmers' successes or challenges with disease management can influence them.

Innovative technologies and practices for disease detection and management can influence them.

Farmers see the visual signs of disease-infected tea leaves, such as discoloration, wilting on the plants.

Agricultural Experts see the disease symptoms and patterns in tea plantations during field visits.

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?

Concerns about the health of their tea plants and potential disease outbreaks.

What do they SAY?
What have we heard them say?
What can we magine them saying?

Expressions of frustration if they experience crop loss due to diseases.

Agricultural experts provide advice and recommendations to tea farmers on disease prevention and treatment

Agricultural experts requests for collaboration with ML researchers to enhance disease detection techniques

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

Agricultural experts conduct research on tea plant diseases and their management

Farmers apply pesticides and treatments when necessary to manage disease outbreaks.

Tea farmers monitor the health and growth of tea plants regularly.

Farmers will Attend agricultural workshops for knowledge and skills improvement.