Conalysis : AI for object recognition and problem analysis in Construction Call (Group 5)

Background

Picking damage type of tile from choice below

- Break
- Fall off
- Chipped
- Cracked
⋮
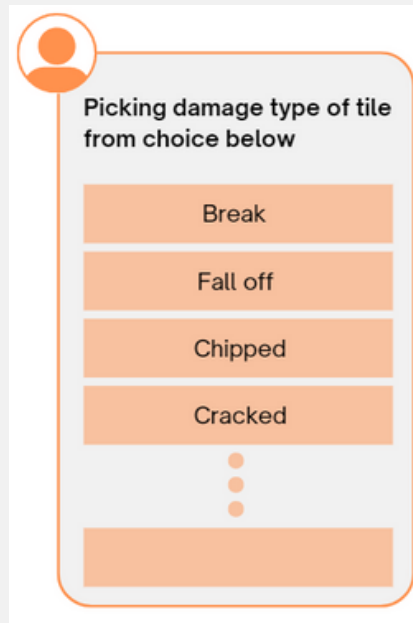
(Example of Boonchuay)

7-11 convenience stores serve 12.6 million daily customers, resulting in a **large number of maintenance** are required.

The Boonchuay chatbot can be used to request maintenance. With this project, **we aim too** help **reduce the overall cost of construction** on every 7/11 branch in Thailand by **reducing the miscalled** material types in construction maintenance.

Process

Prepare data
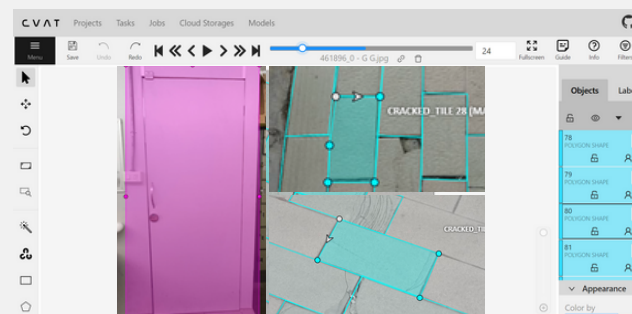
Collecting, labeling and cleansing the data

→

Pretrained Model

ultralytics YOLOv8

MobileNet v2

Yolov8n and MobileNet v2

→

Model Training

Predicted Class: Selling Area
Confidence: 0.94

Tile 1.0 Back_Door 0.9
Front_Door 0.9

Accuracy:
Door: **98.83%**
Floor: **98.33%**

Pain point

Too Many types of materials and causes of damage.

↓

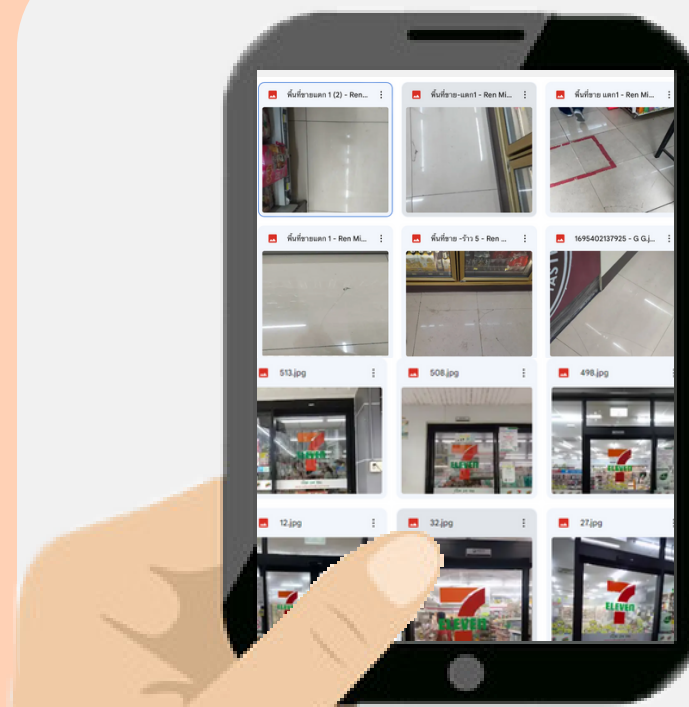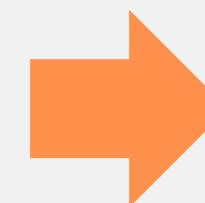Lead to

Misreported types of material.

value

Reduce cost more than **700,000** Baht per year

Reduce the incorrect calls more than **700** calls per year

Overall system

UPLOAD →

Select a picture from gallery

→

Object — Floor
Material Type — Granito tile 60x60
Location — Selling Area
Contact — 02-xxx-xxxx

System send result back as following detail