أكاديمية سدايا
SDAIA Academy

Forest Fire Detection

Deep Learning project

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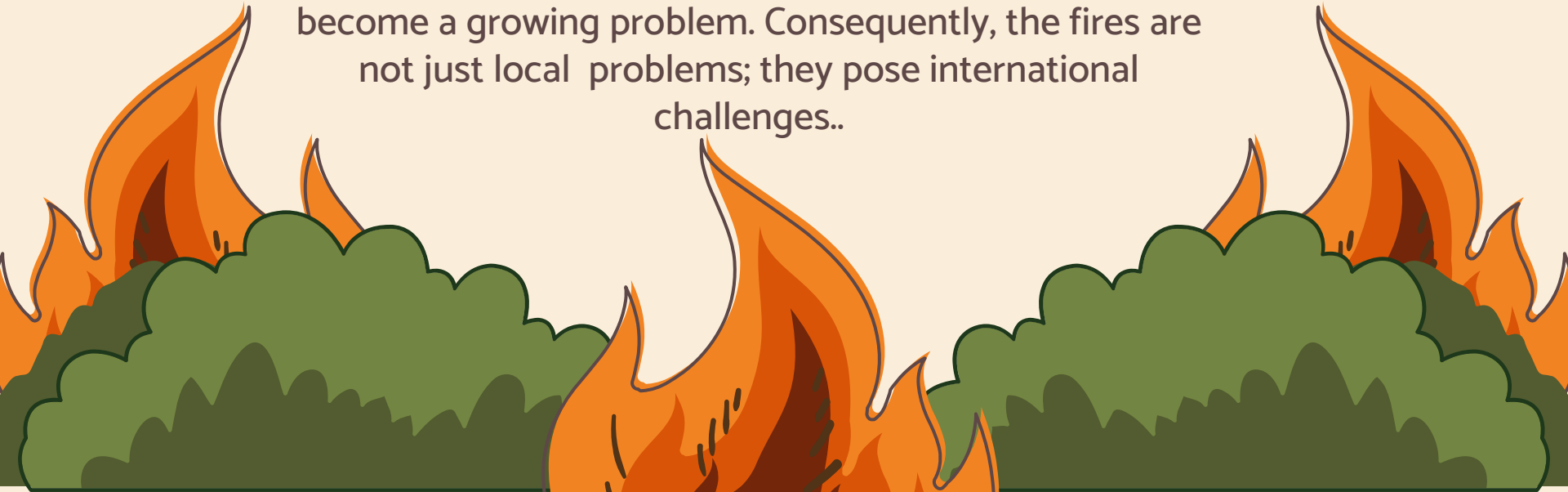
Introduction

wildfire conditions are becoming more extreme and increasingly reflect rising global temperatures.

As the planet continues to rapidly warm, wildfires will become a growing problem. Consequently, the fires are not just local problems; they pose international challenges..



Goals

- Help our Government especially General Directorate of Civil Defense in Rapid detection of forest fire to reduce casualties and property losses.

- Doing a fire warning alert if the live camera see the fire.

Workflow

01
Load Data

02
Process image

03
Split Data

04
Model

05
Evaluation

06
Demo

Dataset

Data contains 5050 images of Fire and Non Fire combined.

Tools

cv2

Demo

NumPy

Linear algebra

Matplotlib

Data visualization

Keras

Model

Pygame

For alert sound

Results

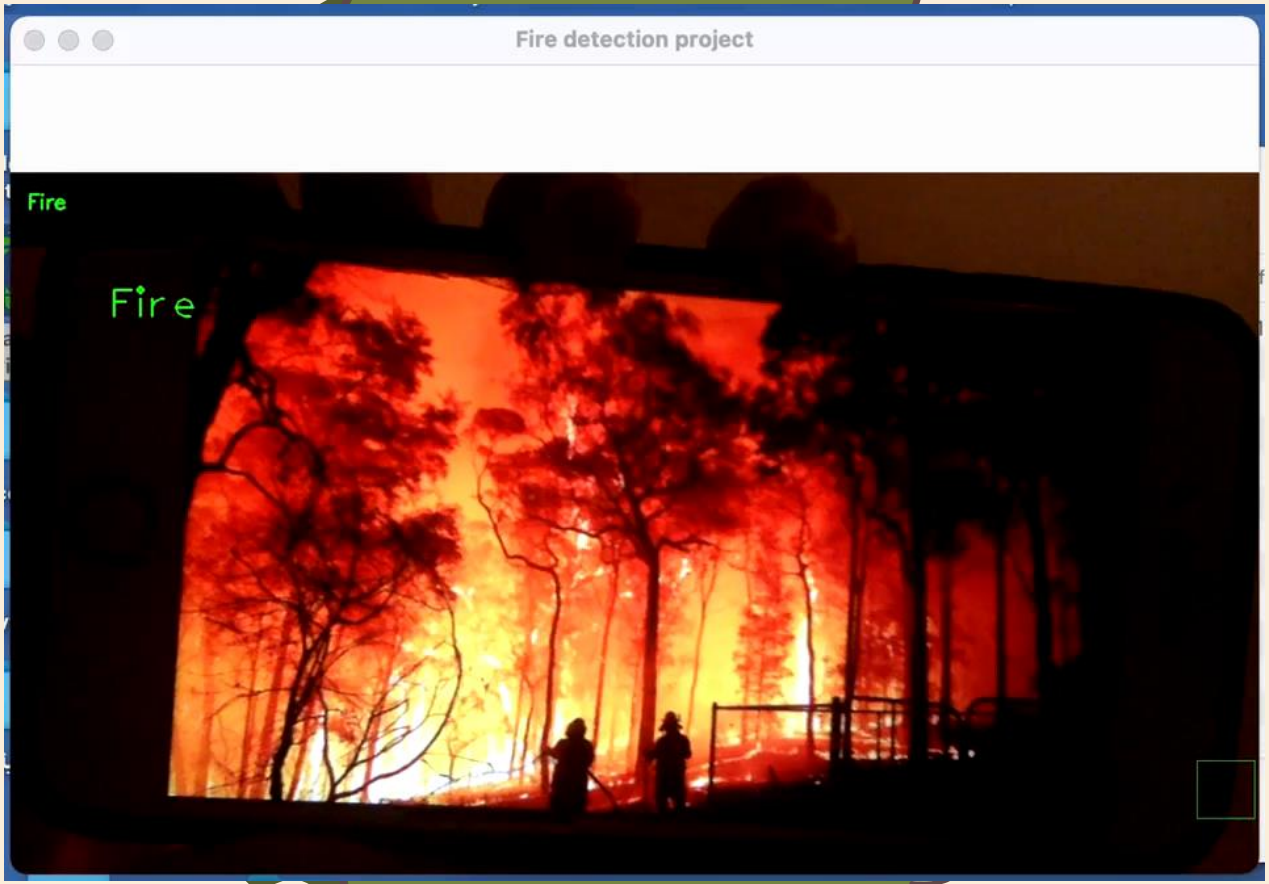
50 Epoch	Accuracy	Loss
Train	0.937	0.168
Test	0.945	0.155

Predict Results

Fire

Non Fire

Demo



Future Work

Load large dataset

Improve Demo

Improve model

Recognize smoke


Thank you