Project Overview

• The Problem:
  ▪ Manually searching video for specific environments
  ▪ Thousands of hours of footage

• The Solution:
  ▪ automatically tag & categorize footage based on features/environments
System Architecture

Frontend

Backend

Data

User

React JS

Flask

python

OpenCV

TensorFlow

SQLite

SQLAlchemy
Process Video Step 1

ADAS Tagging Tool

1. Select Folders

Use the folder icon below to browse for files. Copy the full file paths of folders you’d like to process, and paste them in the text box below. Clicking ‘Add Folder To List’ will add it to the list of folders to be processed.

Browse Folders

Full Path

Selected Folders List

C:\Users\strie\Documents\20-21\Fall20\CSE498\team-bosch\ML\video

NEXT
## Process Video Step 2

**ADAS Tagging Tool**

### Review Selected Files

- **Selected Files**
  - C:\Users\striel\Documents\20-21\Fall20\CSE498\team-bosch\ML\video\Gen5_RU_2019-04-15_08-07-17-0000_Tr1.mp4
  - C:\Users\striel\Documents\20-21\Fall20\CSE498\team-bosch\ML\video\highway_1sec.avi

- **Batch ID** (e.g. mm-dd-yyyy-hhmm)
  - 10-18-2020-1122

- **Video File Source** (e.g. minivan, mustang, etc)
  - minivan

[Button] PROCESS BATCH
Process Video Step 3

- Select Folders
- Review Selected Files
- Review Results

Please wait while your videos are being processed.
Process Video Review Results

ADAS Tagging Tool

Review Results

Done! Click the files below to view the associated tags.

C:\Users\strie\Documents\20-21\Fall20\CSE498\team-bosch\ML\video\Gen5_RU_2019-04-15_08-07-17-0000_Tr1.mp4

C:\Users\strie\Documents\20-21\Fall20\CSE498\team-bosch\ML\video\highway_1sec.avi

Not Rain: 0.8
car: 0.9990465641021729
day: 0.9
truck: 0.7418460249900818
Process Video Review Results
Search For Tags Step 1
Search For Tags Step 2
Search For Tags Step 3

ADAS Tagging Tool

Review Selections

Date Range: 9/1/2020 to 10/18/2020
Video File Sources: mini van mustang
Batch Ids: endurance-run-09-12-2020-0900
Selected Tags: Desert

SEARCH FOR TAGS

Results
Search For Tags Step 4

**ADAS Tagging Tool**

- **Select Filters**
- **Select Tags**
- **Review Selections**
- **Results**
  
  C:/video/Phx123.avi
  C:/video/NYC456.avi
  C:/video/Atl523.avi
What’s left to do?

• Train new objects(bridge/tunnel)
• Logic workspace
• Progress bar for videos
• Apply filters to DB query
• General UI improvements
Questions?