

AI TraceFinder

localhost:8501

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# AI TraceFinder

## Welcome to AI TraceFinder

This tool identifies the **scanner model** of a given scanned image using a **Hybrid CNN model** combining handcrafted and deep features.

Choose Action

- HOME
- Data Visualization
- Feature Explorer
- Prediction
- Preprocess Datasets
- Hybrid Model
- Management
- Baseline Feature Extractor
- Baseline Model Report



AI TraceFinder

localhost:8501

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## AI TraceFinder

Digital Scanner Forensics

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### Aspect Ratio Distribution

Aspect Ratio (W/H)	Count
0.705	2
0.707	14
0.708	3
0.711	1

### Brightness Distribution

Mean Brightness	Count
252.5	1
253.8	1
254.0	1
254.2	1
254.4	2
254.6	2
254.8	2
255.0	8

### ⚠ Data Quality Issues

1 corrupted images found.

### Random Samples from Each Class

ENG IN 16:49 03-11-2025

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Select Dataset

Official

Scanning official dataset (recursive)...

### Class-wise Image Count (Recursive)

	Class Name	Image Count	% of Total
0	Canon120-1 (1)	200	10
1	Canon120-2 (1)	200	10
2	Canon220 (1)	200	10
3	Canon9000-1 (1)	200	10
4	Canon9000-2 (1)	200	10
5	EpsonV370-1 (1)	200	10
6	EpsonV370-2 (1)	200	10
7	EpsonV39-1 (1)	200	10
8	EpsonV39-2 (1)	200	10
9	EpsonV550 (1)	200	10



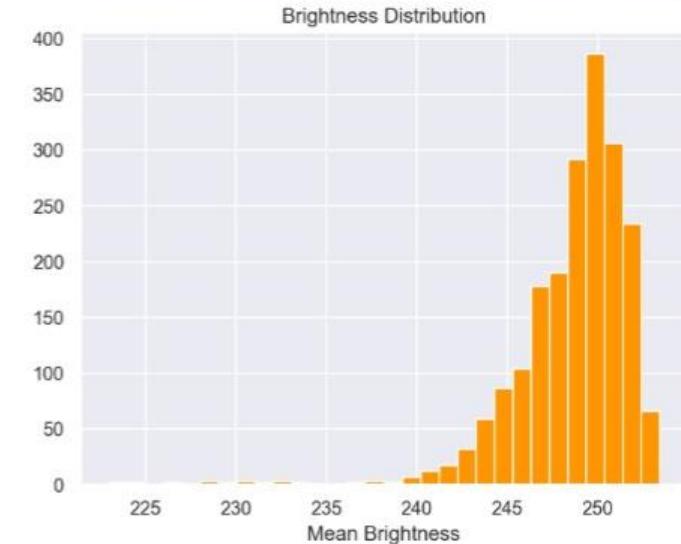
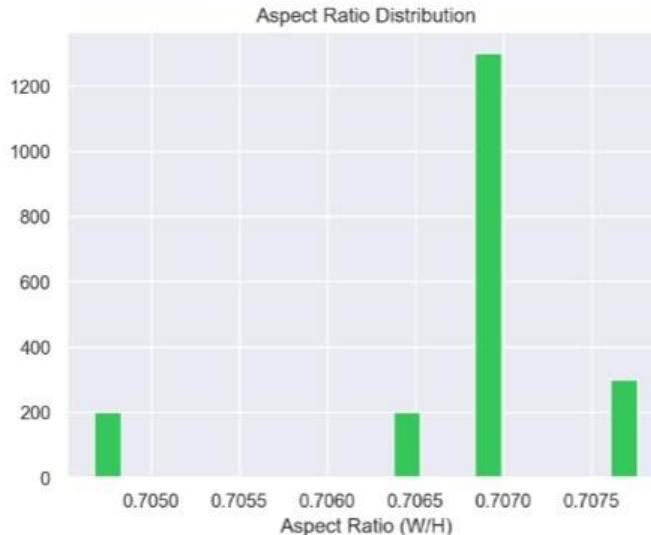
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Canon120-1  
Canon120-2  
Canon220  
Canon9000-1  
Canon9000-2  
EpsonV370-1  
EpsonV370-2  
EpsonV39-1  
EpsonV39-2  
EpsonV550  
manifest



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### Management

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## Random Samples from Each Class

### Canon120-1 (1) (200 images)



MR. DANIEL PIER CLIENT N° 1234		MONTHLY	25 DEC 2020
		Due on Receipt	
QUANTITY	DESCRIPTION	UNIT PRICE	LINE TOTAL
1	MOUSE	\$30	\$30
1	KEYBOARD	\$45	\$45
1	SCREEN	\$2140	\$2140
1	TABLE	\$3300	\$3300



s1\_67.tif

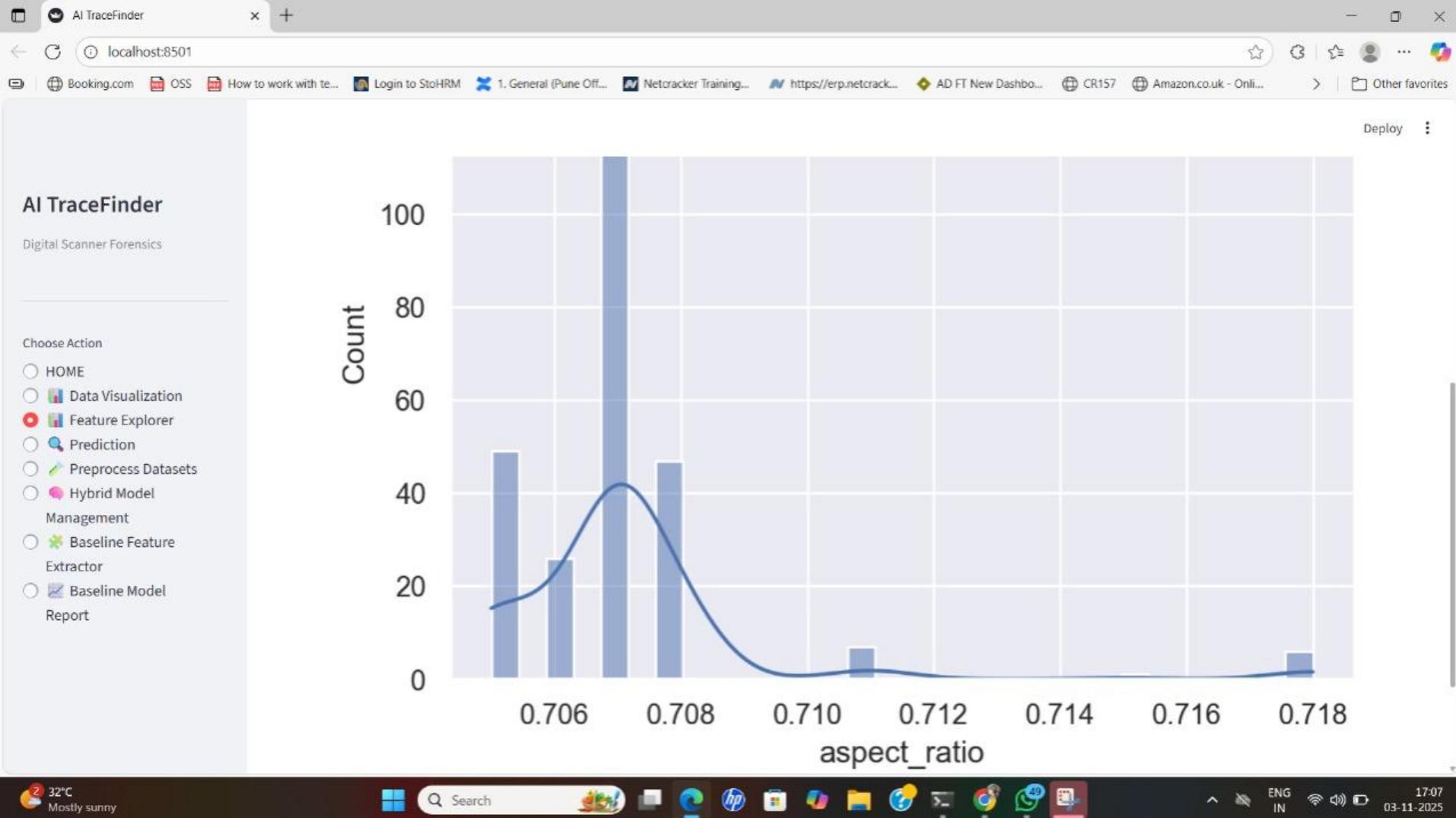
s1\_27.tif

s1\_10.tif



Search





## AI TraceFinder

Batch Scanner Formulas

Choose Action

HOME

Data Visualization

Feature Explorer

Predict Scanner

Preprocess Datasets

Train Models

Evaluate Models

Batch Scanner Testing

## Evaluate Models

Evaluate Random Forest

### Random Forest Classification Report

precision recall f1-score support

Official/Canon120-1/150	0.86	0.88	0.88	24
Official/Canon120-1/300	1.00	0.80	0.89	5
Official/Canon120-2/150	0.86	0.75	0.80	8
Official/Canon220/150	0.75	0.80	0.77	15
Official/Canon220/300	0.67	1.00	0.90	2
Official/Canon9000-1/150	1.00	1.00	1.00	14
Official/Canon9000-2/150	1.00	0.95	0.98	21
Official/Canon9000-2/300	1.00	0.88	0.93	16
Official/EpsonV370-1/150	0.81	0.69	0.68	19
Official/EpsonV370-2/150	0.93	0.87	0.90	30
Official/EpsonV370-2/300	1.00	1.00	1.00	2
Official/EpsonV370-3/150	0.73	0.73	0.73	14
Official/EpsonV370-3/100	0.29	0.86	0.82	21
Official/EpsonV370-2/50	0.04	0.68	0.08	24
Official/EpsonV370-3/50	0.49	0.29	0.39	18

&gt; Evaluate SVM

Evaluate Hybrid CNN

Run Hybrid Evaluation

## Evaluate Hybrid CNN

Running hybrid model predictions (this may take a while)...

Hybrid Test Accuracy: 72.94%

Classification Report:

precision recall f1-score support

Canon120-1	0.44	0.49	0.46	416
Canon120-2	0.55	0.49	0.52	416
Canon220	0.81	0.76	0.80	416
Canon9000-1	0.96	0.73	0.83	416
Canon9000-2	0.78	0.96	0.86	407
EpsonV370-1	0.82	0.92	0.86	416
EpsonV370-2	0.91	0.75	0.82	417
	0.82	0.89	0.85	416