

## AI TraceFinder

Digital Scanner Forensics

Choose Action

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

# 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.



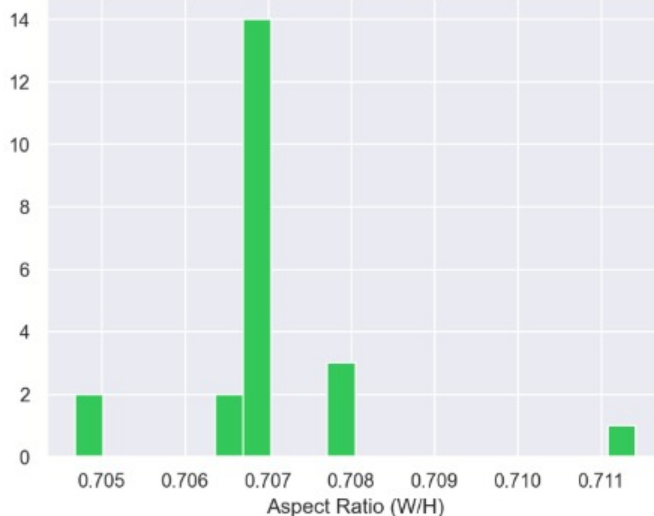
# AI TraceFinder

Digital Scanner Forensics

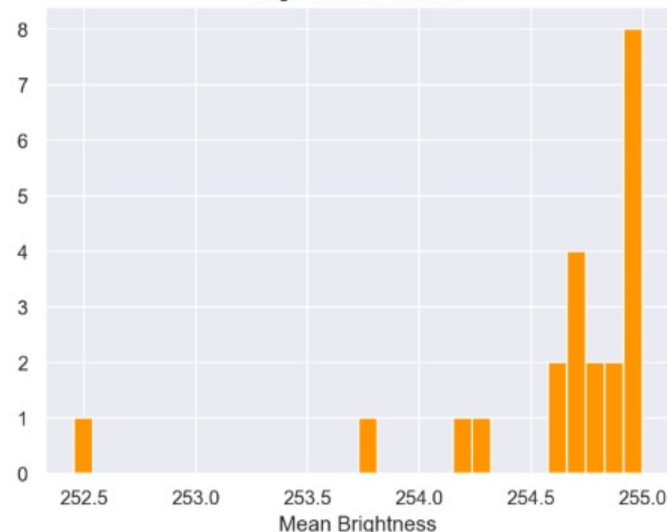
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  - ☐ Baseline Model Report

Aspect Ratio Distribution



Brightness Distribution



## ⚠ Data Quality Issues

🔧 1 corrupted images found.

## 🎲 Random Samples from Each Class



Search



ENG IN



16:49  
03-11-2025



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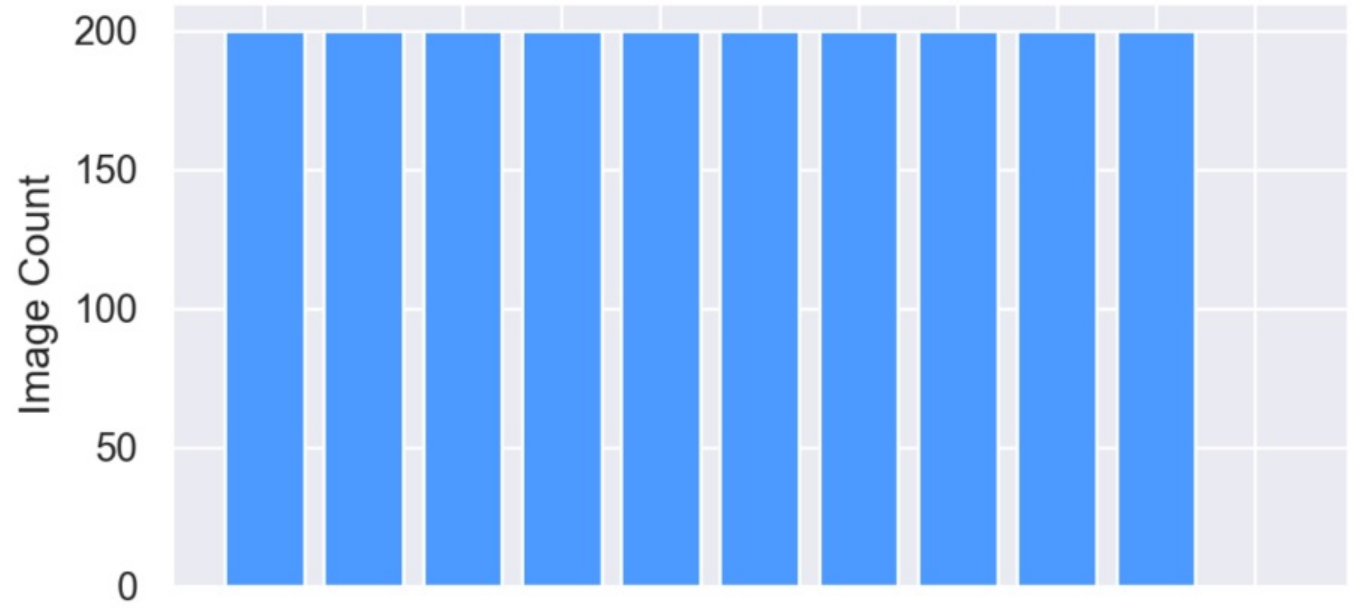
Total Images  
2000

Corrupted Images  
0

Duplicate Images  
0

Deploy

## Class Distribution - Official



## AI TraceFinder

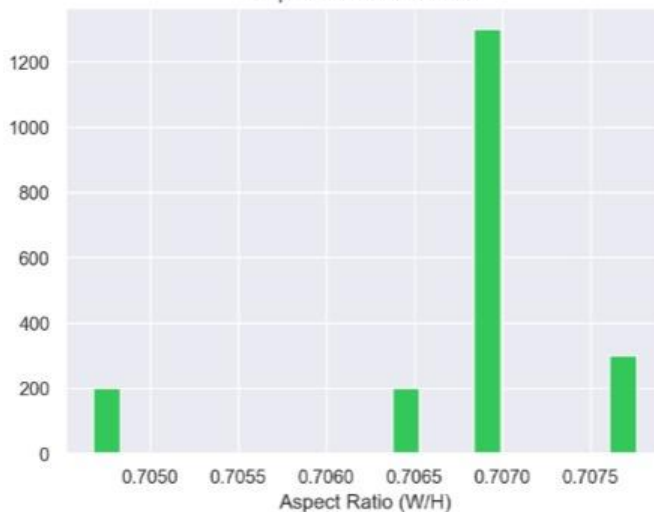
Digital Scanner Forensics

Choose Action

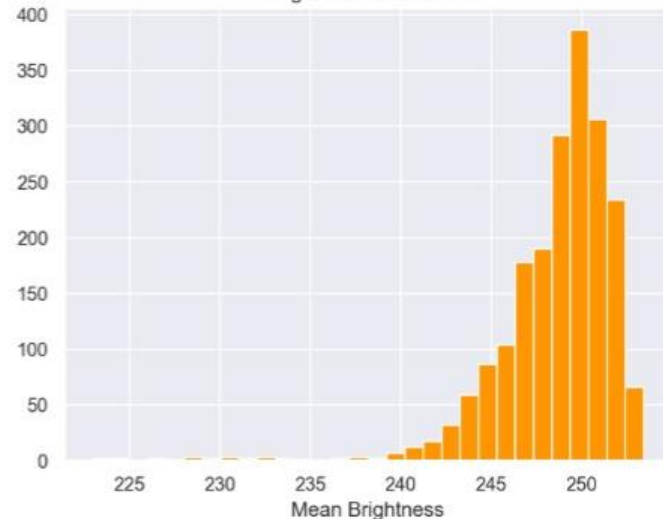
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Canon120-1 \  
Canon120-2 \  
Canon220 \  
Canon9000-1 \  
Canon9000-2 \  
EpsonV370-1 \  
EpsonV370-2 \  
EpsonV39-1 \  
EpsonV39-2 \  
EpsonV550 \  
manifest

Aspect Ratio Distribution



Brightness Distribution



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## Random Samples from Each Class

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



PHOTO

Visa application

Applicant Information

Full Name: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_ Apartment/Flat # \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Pasport No: \_\_\_\_\_ Date of Issue: \_\_\_\_\_ Issued By: \_\_\_\_\_

Production Applied For: \_\_\_\_\_

Sex: ☐ Male ☐ Female Number of photos: ☐ 1 ☐ 2

Nationality: \_\_\_\_\_ Purpose of visit: \_\_\_\_\_

Have you ever been before? ☐ YES ☐ NO

If yes, when? \_\_\_\_\_

Visa Entry Information

Purpose: \_\_\_\_\_ Duration: \_\_\_\_\_

From: \_\_\_\_\_ To: \_\_\_\_\_ Date of arrival? ☐ YES ☐ NO If no, date: \_\_\_\_\_

Name of entry permit/organization: \_\_\_\_\_

From: \_\_\_\_\_ To: \_\_\_\_\_ Did you produce? ☐ YES ☐ NO Degree: \_\_\_\_\_

Address: \_\_\_\_\_

Checklist and Signature

I certify that my answers are true and complete to the best of my knowledge.

If this application leads to accept, I understand that false or misleading information in my application or interview may result in my refusal.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

s1\_67.tif

s1\_27.tif

s1\_10.tif

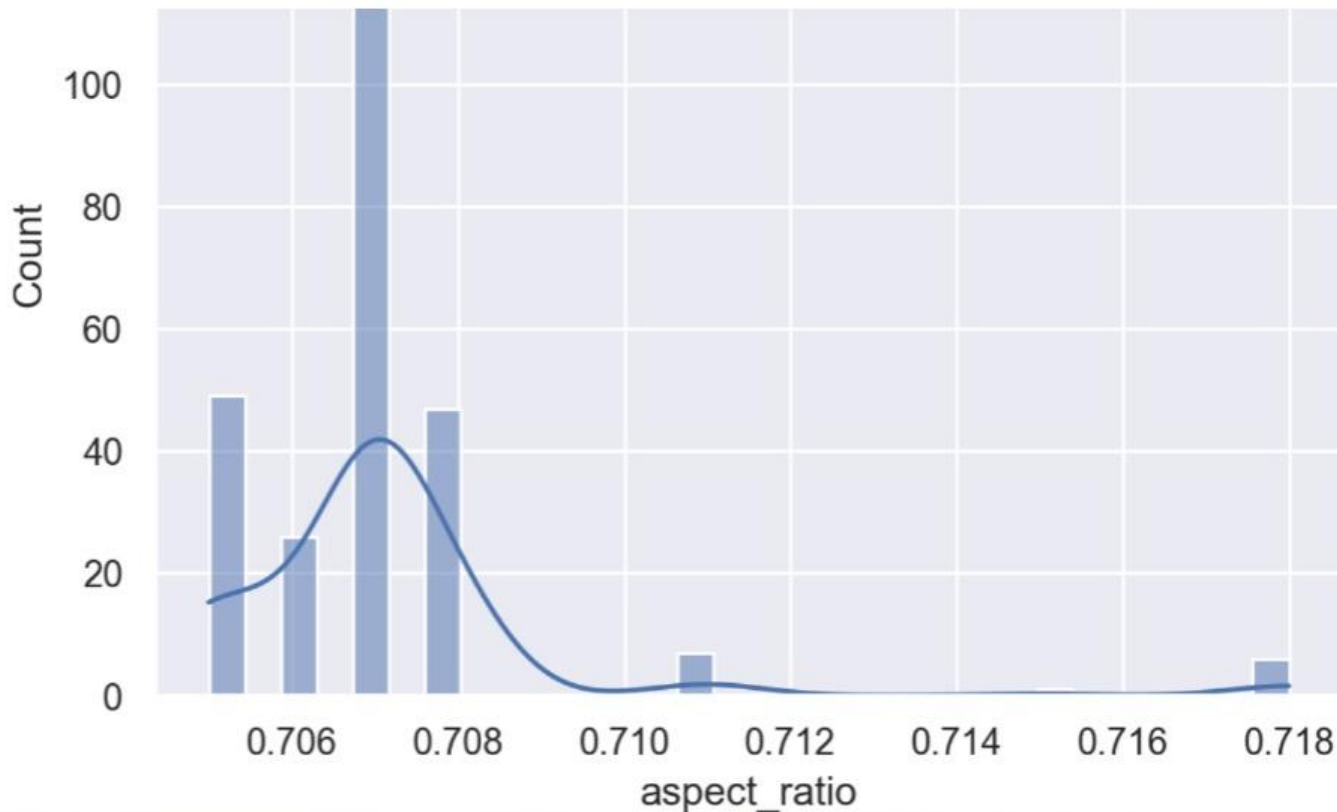


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# AI TraceFinder

Batch Scanner Forensics

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	0.88	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	0.60	0.77	15
Official/Canon220/300	0.67	1.00	0.80	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	0.85	19
Official/EpsonV370-2/150	0.83	0.87	0.90	30
Official/EpsonV370-2/300	1.00	1.00	1.00	2
Official/EpsonV39-1/150	0.70	0.79	0.79	14
Official/EpsonV39-1/300	0.78	0.86	0.82	21
Official/EpsonV39-2/150	0.84	0.88	0.86	24
Official/EpsonV39-2/300	0.89	0.79	0.89	18

> 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	0.78	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
...	...	...	...	...