

REU Week 2

Lance Hartung

Recognition Performance

<u>Predicted</u>	<u><---- Actual ----></u>					
	Faces	Airplanes	Cars	Elephants	Minarets	Rhinos
Faces	79.48	0.27	0.00	7.14	0.00	0.00
Airplanes	0.00	68.53	0.00	0.00	0.00	0.00
Cars	0.52	29.20	94.52	7.14	0.00	0.00
Elephants	16.10	0.40	2.74	71.43	0.00	22.22
Minarets	0.26	0.80	2.74	0.00	100.00	0.00
Rhinos	3.64	0.80	0.00	14.29	0.00	77.78

Parameters

- 64 Gaussian derivative filters
- 100,000 words from 300 training images
- K-means clustering with 100 centers
- 1257 testing images
- Augmented histogram using exponential thresholds (0, 1, 2, 4, 8, 16, 32, 64, 128, 256)

Research Interests

- Object tracking in smart cameras and/or camera networks
- Detection and localization (PASCAL competition)
- Learning problems with crazy math