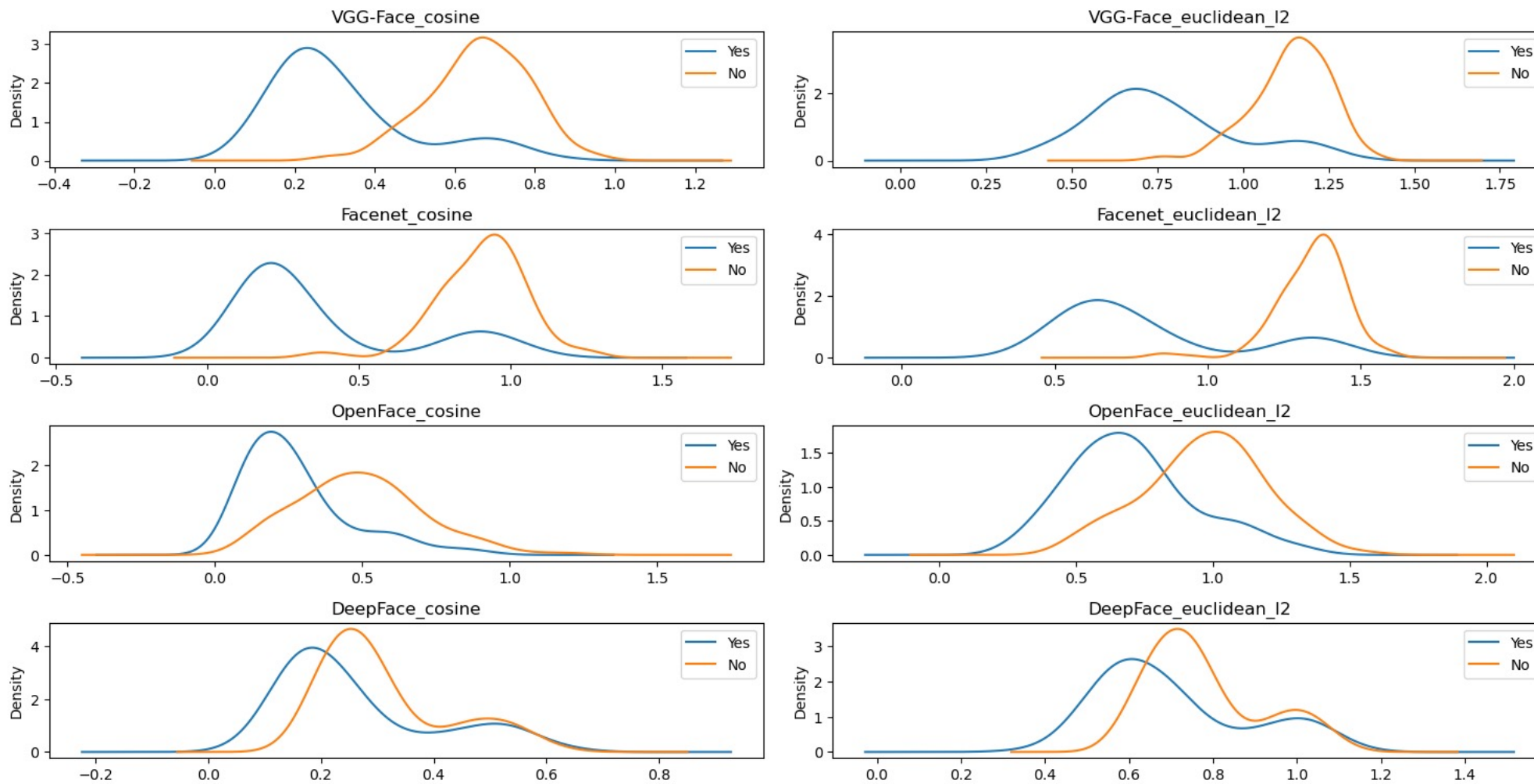


Face Recognition

Ensemble model look

Dec 13-2022

Different Models with different distance matrices



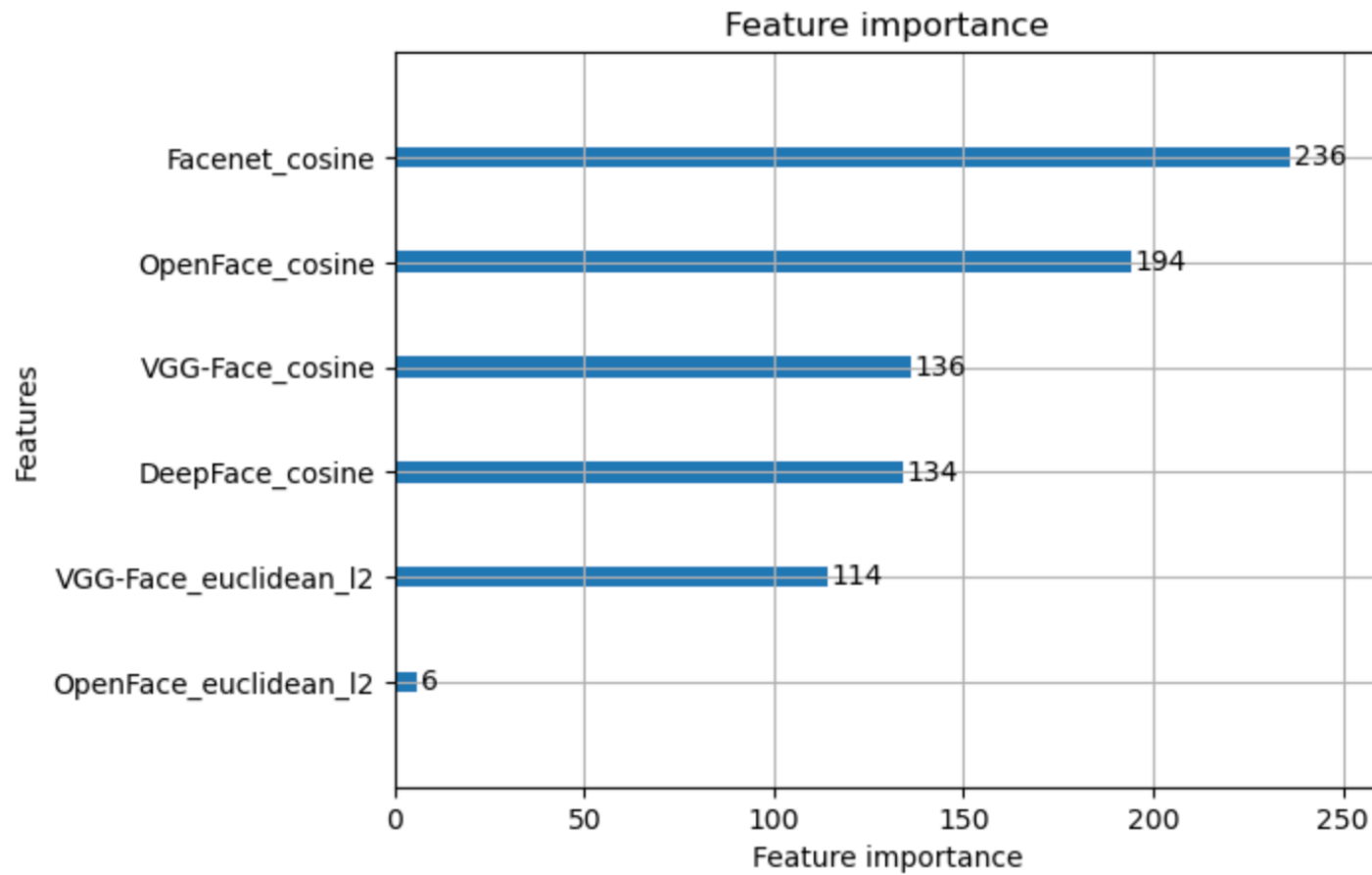
Ensemble Model: Distance matrices from different models as feature (8)

VGG-Face_cosine	VGG-Face_euclidean_l2	Facenet_cosine	Facenet_euclidean_l2	OpenFace_cosine	OpenFace_euclidean_l2	DeepFace_cosine	DeepFace_euclidean_l2	decision
0.1907	0.6176	0.2157	0.6569	0.7187	1.1989	0.2069	0.6432	1
0.6830	1.1688	1.0045	1.4174	0.4146	0.9106	0.5080	1.0080	0
0.5991	1.0946	0.8062	1.2698	0.5895	1.0859	0.4176	0.9139	1
0.5807	1.0777	0.7473	1.2226	0.1254	0.5008	0.2442	0.6988	0
0.7349	1.2124	0.8958	1.3385	0.8430	1.2984	0.5425	1.0416	1
0.7753	1.2453	0.9421	1.3727	0.7363	1.2135	0.3183	0.7979	0
0.1903	0.6169	0.1745	0.5908	0.1480	0.5441	0.1208	0.4914	1
0.2251	0.6710	0.3122	0.7902	0.2400	0.6929	0.3053	0.7813	1
0.8160	1.2775	1.2506	1.5815	0.8422	1.2978	0.2836	0.7531	0
0.1265	0.5029	0.1728	0.5879	0.1790	0.5983	0.2802	0.7486	1

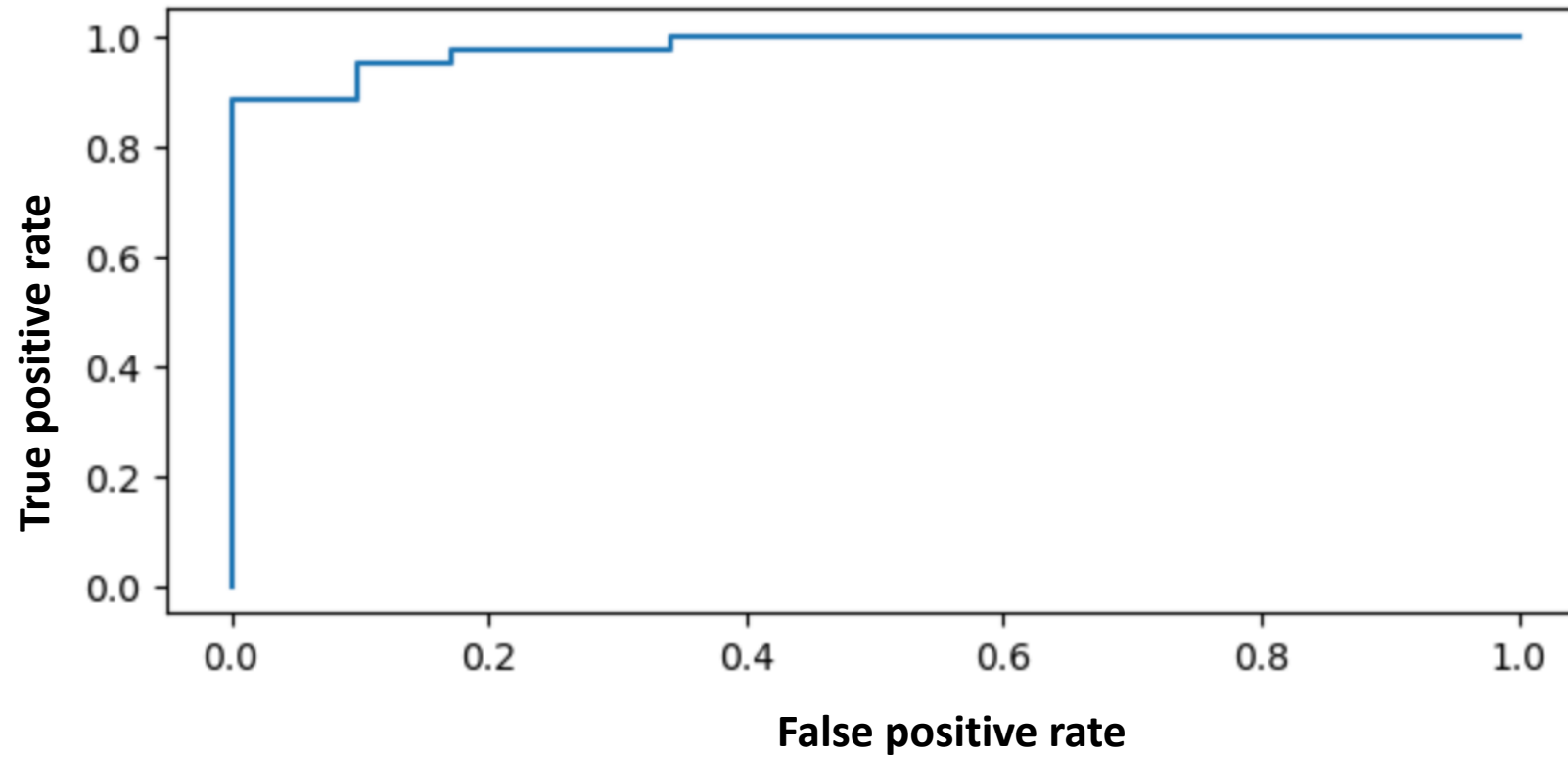
Ensemble model: Evaluation

- Test: Train = 30:70
- Precision: 91.12 %
- Recall: 95.35 %
- F1 score 93.18 %
- Accuracy: 92.86 %

Feature Importance

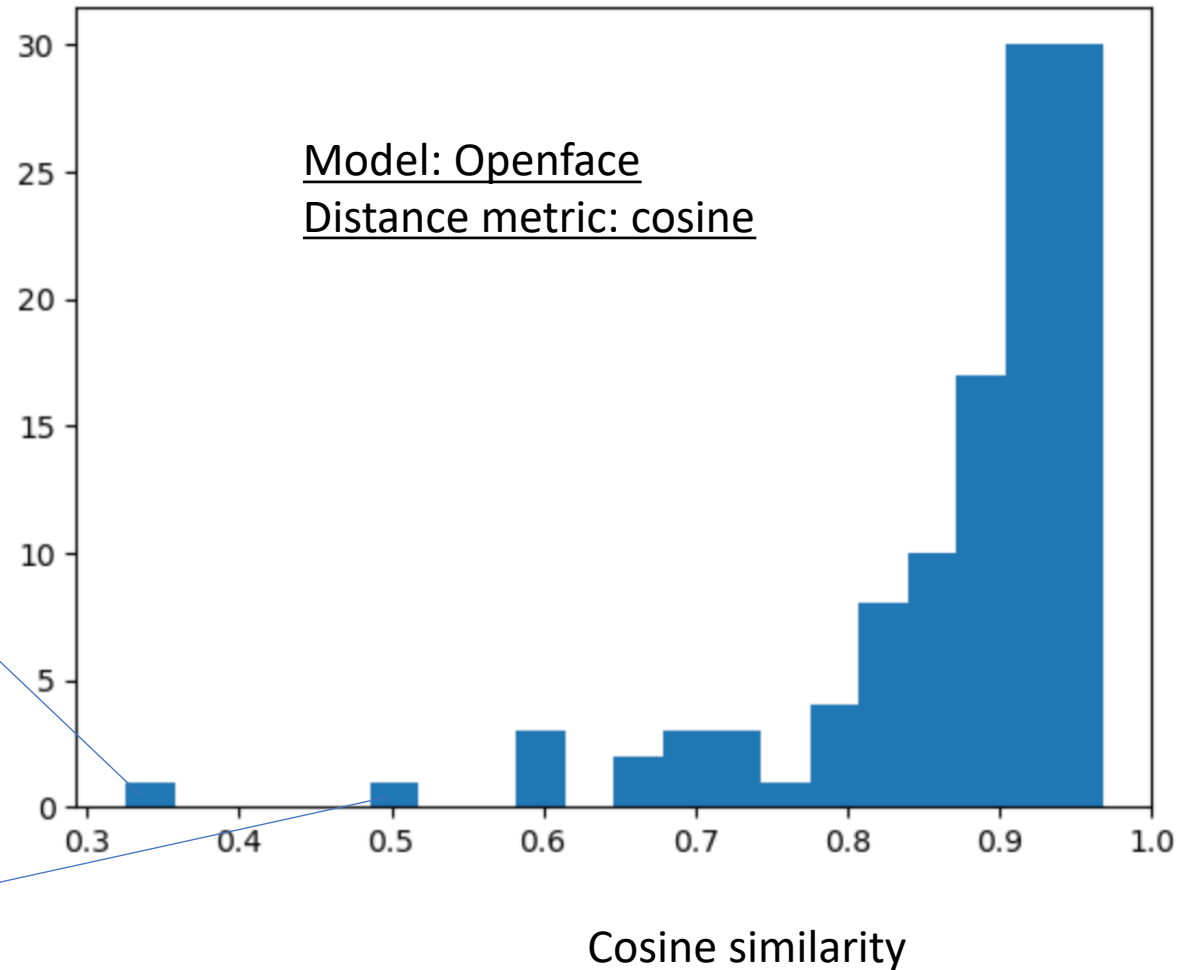
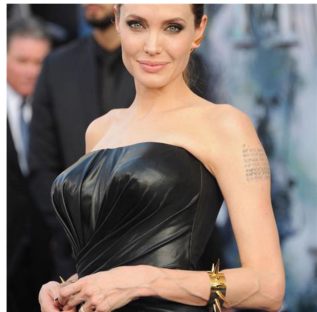


ROC curve



What about finding distance from average embedding (?)

Example of 113
photos of
Angelina Jolie



Goal

- Make similar comparison with different models and matrices as in slide 2 for average embedding
- Look at the intermediate steps in face detection and find out if we can put any threshold to get better face detection.
- Speed and size
- Implementation in streaming
- AWS