



Politecnico di Torino

Fingerprint spoofing detection

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Capitolo 1

Introduzione

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Capitolo 2

Classification and Validation

2.1 Introduzione

2.2 Multivariate Gaussian Classifiers

Classifier	$\pi = 0.1$	$\pi = 0.5$	$\pi = 0.9$
RAW Features			
Gaussian	0.593	0.333	0.111
Naive Gaussian	0.815	0.47	0.146
Tied Gaussian	0.722	0.484	0.185
Naive Tied Gaussian	0.794	0.564	0.203

Classifiers	$\pi = 0.1$	$\pi = 0.5$	$\pi = 0.9$	$\pi = 0.1$	$\pi = 0.5$	$\pi = 0.9$
PCA (m=5)			PCA + LDA (m=5)			
Gaussian	0.652	0.354	0.112	0.652	0.354	0.112
Naive Gaussian	0.912	0.446	0.122	0.732	0.402	0.13
Tied Gaussian	0.685	0.501	0.192	0.685	0.501	0.192
Naive Tied Gaussian	0.905	0.681	0.218	0.685	0.501	0.192

Classifiers	$\pi = 0.1$	$\pi = 0.5$	$\pi = 0.9$	$\pi = 0.1$	$\pi = 0.5$	$\pi = 0.9$
PCA (m=8)			PCA + LDA (m=8)			
Gaussian	0.604	0.338	0.111	0.604	0.338	0.111
Naive Gaussian	0.869	0.43	0.118	0.669	0.405	0.145
Tied Gaussian	0.711	0.484	0.183	0.711	0.484	0.183
Naive Tied Gaussian	0.912	0.671	0.213	0.711	0.484	0.183

2.3 Logistic Regression

The plots show how minDCF is affected by different values of λ . They are exploited to calibrate λ , which is the regularization term.

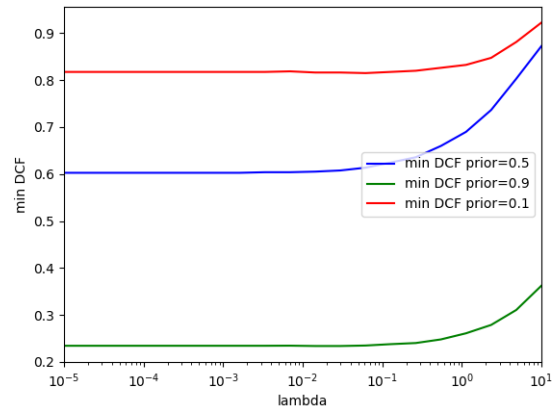


Figura 2.1: DCF - RAW LogReg