

Table 1. Intensity Estimation Results by Approach

Database	Extraction	Reduction	Prediction	ICC
BP4D-SFE	Gabor	Laplacian	Two-class	0.37
BP4D-SFE	Gabor	Laplacian	Multiclass	0.88
BP4D-SFE	Gabor	Laplacian	Regression	0.90
BP4D-SFE	Gabor	PCA	Two-class	0.62
BP4D-SFE	Gabor	PCA	Multiclass	0.83
BP4D-SFE	Gabor	PCA	Regression	0.86
BP4D-SFE	SIFT	Laplacian	Two-class	0.47
BP4D-SFE	SIFT	Laplacian	Multiclass	0.90
BP4D-SFE	SIFT	Laplacian	Regression	0.92
BP4D-SFE	SIFT	PCA	Two-class	0.67
BP4D-SFE	SIFT	PCA	Multiclass	0.86
BP4D-SFE	SIFT	PCA	Regression	0.89
Spectrum	Gabor	Laplacian	Two-class	0.23
Spectrum	Gabor	Laplacian	Multiclass	0.64
Spectrum	Gabor	Laplacian	Regression	0.60
Spectrum	Gabor	PCA	Two-class	0.36
Spectrum	Gabor	PCA	Multiclass	0.47
Spectrum	Gabor	PCA	Regression	0.45
Spectrum	SIFT	Laplacian	Two-class	0.49
Spectrum	SIFT	Laplacian	Multiclass	0.65
Spectrum	SIFT	Laplacian	Regression	0.61
Spectrum	SIFT	PCA	Two-class	0.51
Spectrum	SIFT	PCA	Multiclass	0.68
Spectrum	SIFT	PCA	Regression	0.57

Table 2. Binary Detection Results by Approach

Database	Extraction	Reduction	Prediction	F ₁
BP4D-SFE	Gabor	Laplacian	Two-class	0.73
BP4D-SFE	Gabor	Laplacian	Multiclass	0.77
BP4D-SFE	Gabor	Laplacian	Regression	0.79
BP4D-SFE	Gabor	PCA	Two-class	0.76
BP4D-SFE	Gabor	PCA	Multiclass	0.76
BP4D-SFE	Gabor	PCA	Regression	0.77
BP4D-SFE	SIFT	Laplacian	Two-class	0.72
BP4D-SFE	SIFT	Laplacian	Multiclass	0.80
BP4D-SFE	SIFT	Laplacian	Regression	0.81
BP4D-SFE	SIFT	PCA	Two-class	0.78
BP4D-SFE	SIFT	PCA	Multiclass	0.78
BP4D-SFE	SIFT	PCA	Regression	0.78
Spectrum	Gabor	Laplacian	Two-class	0.39
Spectrum	Gabor	Laplacian	Multiclass	0.57
Spectrum	Gabor	Laplacian	Regression	0.50
Spectrum	Gabor	PCA	Two-class	0.48
Spectrum	Gabor	PCA	Multiclass	0.45
Spectrum	Gabor	PCA	Regression	0.43
Spectrum	SIFT	Laplacian	Two-class	0.52
Spectrum	SIFT	Laplacian	Multiclass	0.59
Spectrum	SIFT	Laplacian	Regression	0.52
Spectrum	SIFT	PCA	Two-class	0.55
Spectrum	SIFT	PCA	Multiclass	0.57
Spectrum	SIFT	PCA	Regression	0.47