

# Early and Late Fusion of Classifiers for the MediaEval Medico Task

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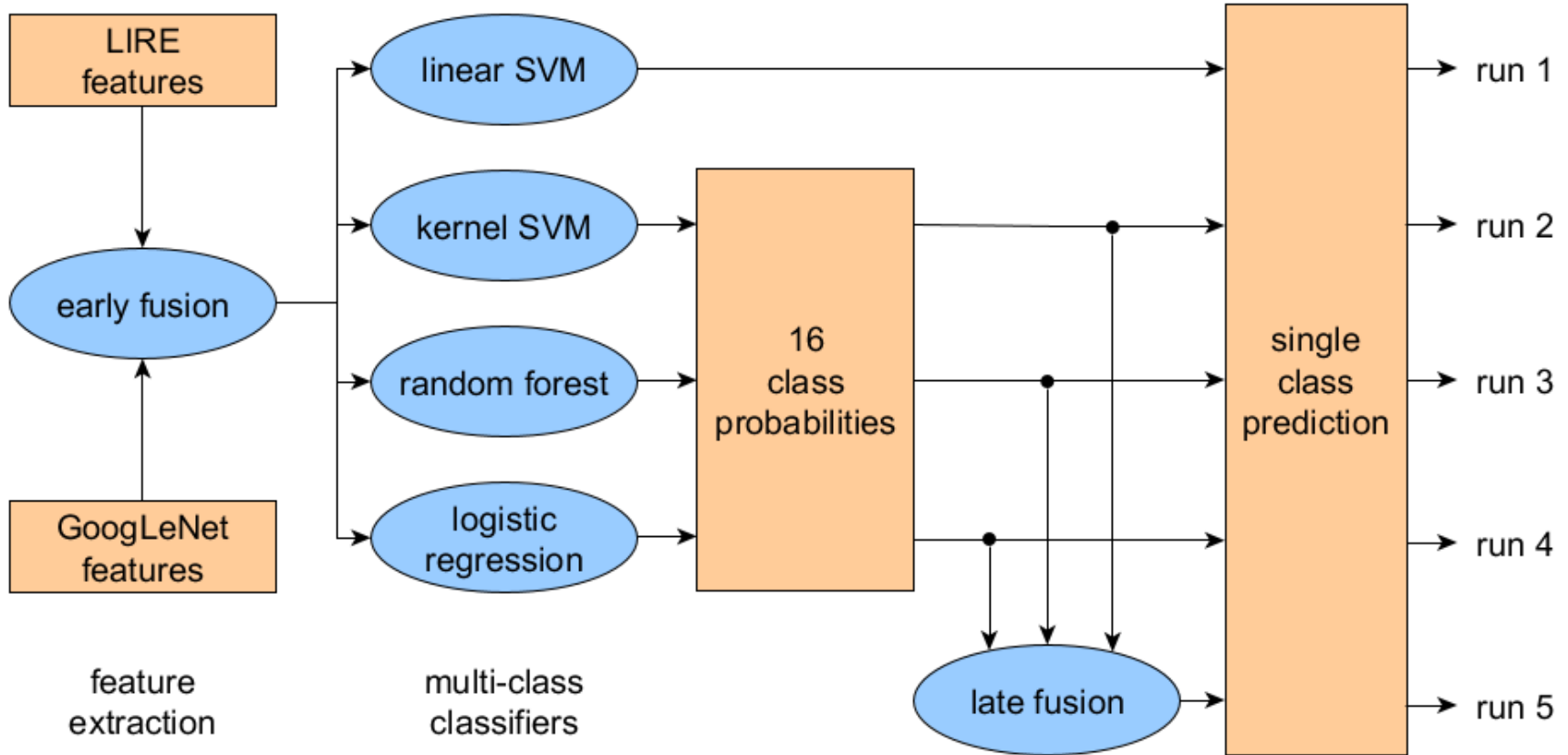
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# Approach



# Results

Run	accuracy	F1	MCC	<i>T</i> / ms
LR	0.9873	0.8986	0.8919	0.119
LSVM	<b>0.9876</b>	<b>0.9008</b>	<b>0.8942</b>	<b>0.103</b>
KSVM	0.9865	0.8921	0.8849	25.808
RF	0.9843	0.8747	0.8664	0.828
RF-KSVM-LR	0.9875	0.9002	0.8936	26.783

T – mean prediction time per image w/o feature extraction

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# Findings

- **Unsuccessful design options:**
  - GoogLeNet features trained for **surgical actions** on a different endoscopic video dataset
  - Ensemble of **nested dichotomies** (binary classifiers arranged in a tree)
- **Successful techniques:**
  - **Early fusion** of traditional and CNN-based features
  - Traditional **linear classifiers** are both effective and efficient on this dataset