

# Wine Project Report

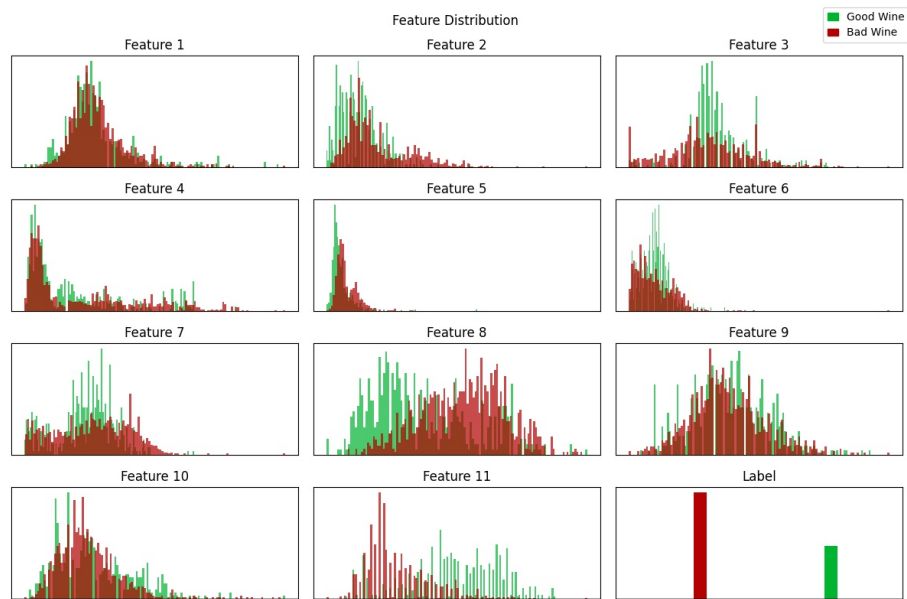
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Quarta Matteo (SXXXXXX)

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## 1 Preliminary Data Analysis

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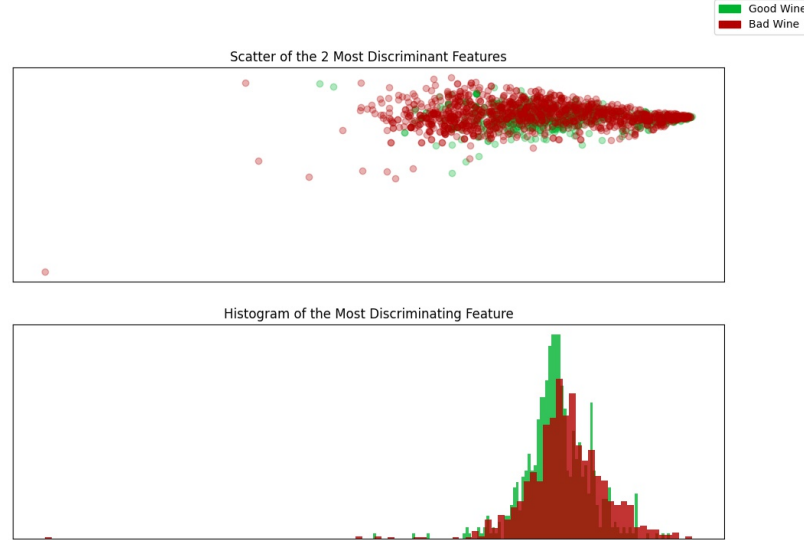


Table 1: MVG Classifier Error Rates

Prior	PCA	Errors
0.1	10	85.510%
0.1	9	83.095%
0.1	8	82.821%
0.1	7	82.053%
0.1	6	80.845%
0.1	5	81.175%
0.1	4	73.491%
0.1	3	63.557%
0.1	2	63.557%
0.1	1	63.557%
0.2	10	84.907%
0.2	9	85.840%
0.2	8	85.236%
0.2	7	84.523%
0.2	6	83.370%
0.2	5	82.272%
0.2	4	77.717%
0.2	3	63.941%

0.2	2	63.557%
0.2	1	63.557%
0.3	10	83.864%
0.3	9	85.565%
0.3	8	86.169%
0.3	7	85.840%
0.3	6	84.248%
0.3	5	83.644%
0.3	4	80.296%
0.3	3	67.124%
0.3	2	63.557%
0.3	1	63.557%
0.4	10	82.382%
0.4	9	85.401%
0.4	8	85.071%
0.4	7	84.248%
0.4	6	83.809%
0.4	5	83.864%
0.4	4	80.132%
0.4	3	70.033%
0.4	2	68.606%
0.4	1	63.557%
0.5	10	80.461%
0.5	9	83.315%
0.5	8	84.029%
0.5	7	83.535%
0.5	6	83.425%
0.5	5	83.699%
0.5	4	77.058%
0.5	3	61.636%
0.5	2	62.184%
0.5	1	57.519%
0.6	10	78.540%
0.6	9	81.614%
0.6	8	81.175%
0.6	7	82.108%
0.6	6	82.492%
0.6	5	81.778%
0.6	4	71.460%
0.6	3	50.933%
0.6	2	49.726%
0.6	1	45.993%
0.7	10	76.894%
0.7	9	79.857%
0.7	8	78.266%
0.7	7	78.485%

0.7	6	77.717%
0.7	5	80.296%
0.7	4	64.544%
0.7	3	46.872%
0.7	2	42.920%
0.7	1	39.846%
0.8	10	73.985%
0.8	9	77.058%
0.8	8	74.863%
0.8	7	72.832%
0.8	6	70.911%
0.8	5	70.911%
0.8	4	54.226%
0.8	3	42.755%
0.8	2	39.791%
0.8	1	38.090%
0.9	10	68.825%
0.9	9	71.954%
0.9	8	67.947%
0.9	7	64.599%
0.9	6	62.788%
0.9	5	58.288%
0.9	4	44.127%
0.9	3	38.639%
0.9	2	38.145%
0.9	1	36.663%

Table 2: MVG Classifier Error Rates

Prior	PCA	% Errors
0.1	10	79.199%
0.1	9	76.619%
0.1	8	76.454%
0.1	7	76.290%
0.1	6	76.290%
0.1	5	75.137%
0.1	4	70.362%
0.1	3	63.557%
0.1	2	63.557%
0.1	1	63.557%
0.2	10	83.480%
0.2	9	81.175%
0.2	8	80.571%
0.2	7	79.857%

0.2	6	79.748%
0.2	5	79.748%
0.2	4	76.180%
0.2	3	63.557%
0.2	2	63.557%
0.2	1	63.557%
0.3	10	82.766%
0.3	9	83.974%
0.3	8	83.480%
0.3	7	82.986%
0.3	6	81.559%
0.3	5	81.614%
0.3	4	80.022%
0.3	3	65.752%
0.3	2	63.557%
0.3	1	63.557%
0.4	10	81.559%
0.4	9	83.919%
0.4	8	84.303%
0.4	7	84.577%
0.4	6	83.041%
0.4	5	82.931%
0.4	4	80.132%
0.4	3	70.143%
0.4	2	68.606%
0.4	1	63.557%
0.5	10	79.363%
0.5	9	81.668%
0.5	8	82.382%
0.5	7	83.095%
0.5	6	82.602%
0.5	5	82.108%
0.5	4	77.442%
0.5	3	62.020%
0.5	2	62.843%
0.5	1	57.519%
0.6	10	74.973%
0.6	9	79.693%
0.6	8	80.022%
0.6	7	80.406%
0.6	6	80.900%
0.6	5	80.296%
0.6	4	70.252%
0.6	3	51.811%
0.6	2	50.768%
0.6	1	45.993%

0.7	10	69.265%
0.7	9	75.906%
0.7	8	76.070%
0.7	7	76.509%
0.7	6	76.345%
0.7	5	76.015%
0.7	4	62.130%
0.7	3	44.512%
0.7	2	42.755%
0.7	1	39.846%
0.8	10	62.130%
0.8	9	67.344%
0.8	8	66.465%
0.8	7	67.234%
0.8	6	66.411%
0.8	5	65.477%
0.8	4	49.835%
0.8	3	40.615%
0.8	2	39.188%
0.8	1	38.090%
0.9	10	53.403%
0.9	9	55.269%
0.9	8	54.281%
0.9	7	52.909%
0.9	6	50.988%
0.9	5	47.091%
0.9	4	39.462%
0.9	3	37.925%
0.9	2	37.596%
0.9	1	36.663%

Table 3: MVG Classifier Error Rates (Tied Covariance)

Prior	PCA	% Errors
0.1	10	69.045%
0.1	9	68.825%
0.1	8	69.429%
0.1	7	69.210%
0.1	6	69.374%
0.1	5	69.868%
0.1	4	64.490%
0.1	3	63.502%
0.1	2	63.557%
0.1	1	63.557%

0.2	10	77.772%
0.2	9	77.772%
0.2	8	77.936%
0.2	7	77.827%
0.2	6	77.223%
0.2	5	77.223%
0.2	4	70.472%
0.2	3	63.557%
0.2	2	63.666%
0.2	1	63.557%
0.3	10	82.602%
0.3	9	82.931%
0.3	8	82.108%
0.3	7	81.943%
0.3	6	81.339%
0.3	5	80.900%
0.3	4	76.674%
0.3	3	63.557%
0.3	2	63.172%
0.3	1	63.557%
0.4	10	85.346%
0.4	9	85.291%
0.4	8	85.126%
0.4	7	84.358%
0.4	6	83.644%
0.4	5	82.602%
0.4	4	79.089%
0.4	3	64.764%
0.4	2	63.008%
0.4	1	63.557%
0.5	10	82.821%
0.5	9	83.041%
0.5	8	83.535%
0.5	7	84.083%
0.5	6	83.150%
0.5	5	82.492%
0.5	4	75.467%
0.5	3	58.288%
0.5	2	56.586%
0.5	1	52.744%
0.6	10	79.912%
0.6	9	80.077%
0.6	8	79.583%
0.6	7	80.351%
0.6	6	79.693%
0.6	5	78.156%

0.6	4	67.344%
0.6	3	47.091%
0.6	2	46.378%
0.6	1	36.498%
0.7	10	74.149%
0.7	9	74.259%
0.7	8	73.436%
0.7	7	73.326%
0.7	6	71.899%
0.7	5	71.844%
0.7	4	53.458%
0.7	3	38.858%
0.7	2	38.310%
0.7	1	36.443%
0.8	10	61.910%
0.8	9	61.855%
0.8	8	58.782%
0.8	7	58.617%
0.8	6	57.903%
0.8	5	56.531%
0.8	4	43.743%
0.8	3	36.608%
0.8	2	36.553%
0.8	1	36.443%
0.9	10	43.139%
0.9	9	43.194%
0.9	8	42.426%
0.9	7	41.822%
0.9	6	39.956%
0.9	5	37.870%
0.9	4	38.310%
0.9	3	36.443%
0.9	2	36.443%
0.9	1	36.443%