



Table with columns: LB Accuracy, LB F1Score, LB ROC AUC, LB Precision, LB Recall, LB F Accuracy, Experiment 3.1.1 Unbalanced training data, no feature selection - Random Forest Classifier, LB F1Score, LB F ROC AUC, LB Precision, LB Recall, LB F1 PNR, LB F1 FNR, LB F1 FPR, LB F1 FPP, LB F1 TNR, LB F1 TPR, LB Accuracy, LB F1Score, LB ROC AUC, LB Precision, LB Recall, LB M PR, LB M TNR, LB M FPR, LB M PPV, LB M NPV, LB M AUC. The table contains 100 rows of data, each representing a different model configuration and its performance metrics across various datasets.

Mean Standard Deviation T Test Significance (Female vs Male)



Table with columns for UB\_Accuracy, UB\_FScore, UB\_ROC\_AUC, UB\_Precision, UB\_Recall, UB\_F\_Accuracy, UB\_F\_PScore, UB\_F\_ROC\_AUC, UB\_F\_Precision, UB\_F\_Recall, UB\_F\_TNR, UB\_F\_FPR, UB\_F\_FNR, UB\_Accuracy, UB\_M\_FScore, UB\_M\_ROC\_AUC, UB\_M\_Precision, UB\_M\_Recall, UB\_M\_FNR, UB\_M\_TNR, UB\_M\_FPR. Rows 0-999.

Summary statistics table with columns: Mean, Standard Deviation, T test, P value. Rows 0-999.



## Summary of Results for Experiment 3.1.2

	Random Forest Classifier			Logistic Regression Classifier			Support Vector Machine			Gaussian Naive Bayes		
	Mean	Standard Deviation	T Test Significance (Female to Male)	Mean	Standard Deviation	T Test Significance (Female to Male)	Mean	Standard Deviation	T Test Significance (Female to Male)	Mean	Standard Deviation	T Test Significance (Female to Male)
<b>All Accuracy</b>	81.66	2.33		74.53	1.96		83.30	1.75		74.75	1.97	
<b>All FScore</b>	76.52	3.09		65.63	2.88		80.07	2.25		62.80	3.26	
<b>All ROC_AUC</b>	80.22%	2.41%		72.40%	1.97%		82.70%	1.85%		71.67%	1.97%	
<b>All Precision</b>	84.80%	3.38%		78.52%	4.30%		82.71%	3.84%		85.28%	3.80%	
<b>All Recall</b>	69.87%	4.42%		56.57%	3.85%		77.91%	4.71%		49.83%	3.77%	
Females Accuracy	84.75	3.03	0.00	77.71	2.42	0.00	89.03	2.23	0.00	78.47	2.35	0.00
Females FScore	71.41	5.74	0.00	51.69	5.87	0.00	82.18	3.72	0.00	51.55	5.38	0.00
Females ROC_AUC	78.47%	3.76%	0.13	67.10%	2.86%	0.00	86.87%	3.01%	0.00	67.12%	2.59%	0.00
Females Precision	85.44%	6.07%	0.88	82.22%	8.04%	0.00	84.22%	5.64%	0.14	85.13%	7.00%	0.37
Females Recall	61.70%	7.03%	0.00	38.12%	6.09%	0.00	80.88%	6.90%	0.00	37.19%	5.02%	0.00
<b>Females FNR</b>	38.30	7.03	0.00	61.88	6.09	0.00	19.12	6.90	0.00	62.81	5.02	0.00
<b>Females TNR</b>	95.24	2.03	0.00	96.09	2.04	0.00	92.86	3.00	0.00	97.05	1.48	0.00
<b>Females FPR</b>	4.76	2.03	0.00	3.91	2.04	0.00	7.14	3.00	0.00	2.95	1.48	0.00
<b>Females TPR</b>	61.70	7.03	0.00	38.12	6.09	0.00	80.88	6.90	0.00	37.19	5.02	0.00
<b>Males Accuracy</b>	78.58	3.05		71.35	3.22		77.56	2.93		71.04	3.22	
<b>Males FScore</b>	79.10	3.21		71.86	3.41		78.78	3.10		68.20	3.96	
<b>Males ROC_AUC</b>	79.07%	2.93%		71.89%	3.07%		77.80%	2.95%		72.57%	2.82%	
<b>Males Precision</b>	84.49%	3.92%		77.47%	4.44%		81.90%	4.62%		85.37%	4.05%	
<b>Males Recall</b>	74.59%	4.93%		67.34%	5.33%		76.24%	5.26%		57.01%	5.09%	
<b>Males FNR</b>	25.41	4.93		32.66	5.33		23.76	5.26		42.99	5.09	
<b>Males TNR</b>	83.55	4.16		76.44	4.82		79.36	5.69		88.12	3.48	
<b>Males FPR</b>	16.45	4.16		23.56	4.82		20.64	5.69		11.88	3.48	
<b>Males TPR</b>	74.59	4.93		67.34	5.33		76.24	5.26		57.01	5.09	
	<b>Random Forest Results</b>			<b>Logistic Regression Results</b>			<b>Support Vector Machine Results</b>			<b>Gaussian Naive Bayes Results</b>		
Averaged over 100 experiments	Sex Disparity (Male Mean - Female Mean)		T Test P Value	Sex Disparity (Male Mean - Female Mean)		T Test P Value	Sex Disparity (Male Mean - Female Mean)		T Test P Value	Sex Disparity (Male Mean - Female Mean)		T Test P Value
<b>Accuracy</b>	-6.17		0.00	-6.36		0.00	-11.47		0.00	-7.43		0.00
<b>FScore</b>	7.69		0.00	20.17		0.00	-3.40		0.00	16.65		0.00
<b>ROC_AUC</b>	0.60%		0.13	4.79%		0.00	-9.06%		0.00	5.45%		0.00
<b>Precision</b>	-0.94%		0.88	-4.75%		0.00	-2.32%		0.14	0.24%		0.37
<b>Recall</b>	12.88%		0.00	29.22%		0.00	-4.64%		0.00	19.82%		0.00
<b>False Negative Rate</b>	-12.88		0.00	-29.22		0.00	4.64		0.00	-19.82		0.00
<b>True Negative Rate</b>	-11.69		0.00	-19.65		0.00	-13.49		0.00	-8.93		0.00
<b>False Positive Rate</b>	11.69		0.00	19.65		0.00	13.49		0.00	8.93		0.00
<b>True Positive Rate</b>	12.88		0.00	29.22		0.00	-4.64		0.00	19.82		0.00



Table with 28 columns: B Accuracy, B FScore, B ROC AUC, B Precision, B Recall, B F Accuracy, B F Score, B F ROC AUC, B F Precision, B F Recall, B F FPR, B F PPV, B F NPV, B Accuracy, B FScore, B ROC AUC, B Precision, B Recall, B F Accuracy, B F Score, B F ROC AUC, B F Precision, B F Recall, B F FPR, B F PPV, B F NPV. Rows 0-999 represent individual data points, and the final row shows Mean, Standard Deviation, and Skewness for the entire dataset.











Table with columns: UB Accuracy, UB F1 Score, UB ROC AUC, UB Precision, UB Recall, UB F1 Accuracy, UB F1 Precision, UB F1 Recall, UB F1 FNR, UB F1 FPR, UB F1 TPR, UB AUC Accuracy, UB F1 Score, UB ROC AUC, UB Precision, UB Recall, UB F1 FNR, UB F1 FPR, UB F1 TPR. Rows 1-99 and summary rows 100-105.

Mean Standard Deviation

T Test (Pearson > Male)











3.1.4 Balanced training data, with feature selection - Logistic Regression Classifier																					
UB Accuracy	UB F1Score	UB ROC_AUC	UB Precision	UB Recall	UB_F_Accuracy	UB_F_F1Score	UB_F_ROC_AUC	UB_F_Precision	UB_F_Recall	UB_F_FNR	UB_F_FPR	UB_F_TPR	UB_M_Accuracy	UB_M_F1Score	UB_M_ROC_AUC	UB_M_Precision	UB_M_Recall	UB_M_FNR	UB_M_TNR	UB_M_FPR	UB_M_TPR
0																					
1	75.6832403644	0.634964593707	0.7188120310694	0.7155203046163	0.5300770904658	0.7704927067504	0.7619041919048	0.6868217000000	0.4738622405643	0.1935483709988	0.4320622405643	0.6550796596100	0.4300024490000	0.3862021900000	0.7256882402000	0.7014471691000	0.6027272727273	0.7027272727273	0.4153844153844	0.5648105648106	0.7272727272728
2	70.67039104525	0.6297516624900	0.6951556249999	0.6788876083871	0.5361481782520	0.74383177087500	0.74383177087500	0.4835346546363	0.6682718012620	0.1874867428370	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
3	73.43017597750	0.6530030589420	0.7105263297900	0.6205742897429	0.5305555555556	0.7246972030000	0.7179178820000	0.6567448026504	0.7248412500000	0.1924776188441	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
4	75.59980230000	0.6538214489750	0.7291812031069	0.6519760000000	0.5305555555556	0.7246972030000	0.7179178820000	0.6567448026504	0.7248412500000	0.1924776188441	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
5	72.05027900000	0.6306970138340	0.7042949711751	0.6037860000000	0.4782760730000	0.7140733800000	0.7140733800000	0.4538308638383	0.6713051901905	0.1874867428370	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
6	75.13986400000	0.6349645937070	0.7292819700000	0.7567975975670	0.5732404672429	0.7025686700000	0.6207726400000	0.7303387000000	0.7047736600000	0.1874867428370	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
7	73.43017597750	0.6530030589420	0.7105263297900	0.6205742897429	0.5305555555556	0.7246972030000	0.7179178820000	0.6567448026504	0.7248412500000	0.1924776188441	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
8	75.13986400000	0.6349645937070	0.7292819700000	0.7567975975670	0.5732404672429	0.7025686700000	0.6207726400000	0.7303387000000	0.7047736600000	0.1874867428370	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
9	72.34082150000	0.5819655196000	0.6784303708200	0.7432671428371	0.4710144692750	0.7449944134070	0.7449944134070	0.4541463414634	0.6395624730000	0.1874867428370	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
10	76.59980230000	0.6538214489750	0.7291812031069	0.6519760000000	0.5305555555556	0.7246972030000	0.7179178820000	0.6567448026504	0.7248412500000	0.1924776188441	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
11	75.13986400000	0.6349645937070	0.7292819700000	0.7567975975670	0.5732404672429	0.7025686700000	0.6207726400000	0.7303387000000	0.7047736600000	0.1874867428370	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
12	74.10941314000	0.6121314480000	0.7028715600000	0.7028715600000	0.5305555555556	0.7246972030000	0.7179178820000	0.6567448026504	0.7248412500000	0.1924776188441	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
13	70.49720072000	0.6120907633000	0.7498948973814	0.7648401789000	0.5104203685000	0.7439006638400	0.7439006638400	0.4621535440000	0.6190673440000	0.1874867428370	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
14	73.14351418000	0.6130691741800	0.7081305388300	0.6819851980000	0.5104203685000	0.7439006638400	0.7439006638400	0.4621535440000	0.6190673440000	0.1874867428370	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
15	74.30167760000	0.6140852713100	0.7181789119900	0.7451405445400	0.5018103810000	0.7439006638400	0.7439006638400	0.4621535440000	0.6190673440000	0.1874867428370	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
16	73.14351418000	0.6130691741800	0.7081305388300	0.6819851980000	0.5104203685000	0.7439006638400	0.7439006638400	0.4621535440000	0.6190673440000	0.1874867428370	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
17	72.55982402000	0.6111111111111	0.7027486272312	0.7336952723121	0.5104203685000	0.7439006638400	0.7439006638400	0.4621535440000	0.6190673440000	0.1874867428370	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
18	75.13986400000	0.6349645937070	0.7292819700000	0.7567975975670	0.5732404672429	0.7025686700000	0.6207726400000	0.7303387000000	0.7047736600000	0.1874867428370	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
19	73.34082150000	0.5429927793200	0.7588015883800	0.7295081927310	0.5714935448300	0.7439006638400	0.7439006638400	0.4621535440000	0.6190673440000	0.1874867428370	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
20	72.34082150000	0.6130691741800	0.7081305388300	0.6819851980000	0.5104203685000	0.7439006638400	0.7439006638400	0.4621535440000	0.6190673440000	0.1874867428370	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
21	74.10941314000	0.6121314480000	0.7028715600000	0.7028715600000	0.5305555555556	0.7246972030000	0.7179178820000	0.6567448026504	0.7248412500000	0.1924776188441	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
22	74.02324387510	0.6348178136510	0.7060015059600	0.6105831750000	0.5066747390000	0.7407259550000	0.7407259550000	0.4571729670000	0.6105831750000	0.1874867428370	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
23	74.10941314000	0.6121314480000	0.7028715600000	0.7028715600000	0.5305555555556	0.7246972030000	0.7179178820000	0.6567448026504	0.7248412500000	0.1924776188441	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
24	74.10941314000	0.6121314480000	0.7028715600000	0.7028715600000	0.5305555555556	0.7246972030000	0.7179178820000	0.6567448026504	0.7248412500000	0.1924776188441	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
25	74.10941314000	0.6121314480000	0.7028715600000	0.7028715600000	0.5305555555556	0.7246972030000	0.7179178820000	0.6567448026504	0.7248412500000	0.1924776188441	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
26	73.14351418000	0.6130691741800	0.7081305388300	0.6819851980000	0.5104203685000	0.7439006638400	0.7439006638400	0.4621535440000	0.6190673440000	0.1874867428370	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
27	74.10941314000	0.6121314480000	0.7028715600000	0.7028715600000	0.5305555555556	0.7246972030000	0.7179178820000	0.6567448026504	0.7248412500000	0.1924776188441	0.4326177031004	0.6478702869960	0.4271368200000	0.3813881188810	0.6817268232000	0.6817268232000	0.6074174757816	0.6805625428100	0.7315874381588	0.6014714757816	0.7272727272728
28	73.14351418000	0.6130691741800	0.7081305388300	0.6819851980000	0.5104203685000	0.7439006638400	0.7439006638400	0.4621535440000	0.6190673440000	0.1874867428370											



