Supplementary Figures

Section 1: Confusion matrices and ROC Curves for Preprocessing Experiments

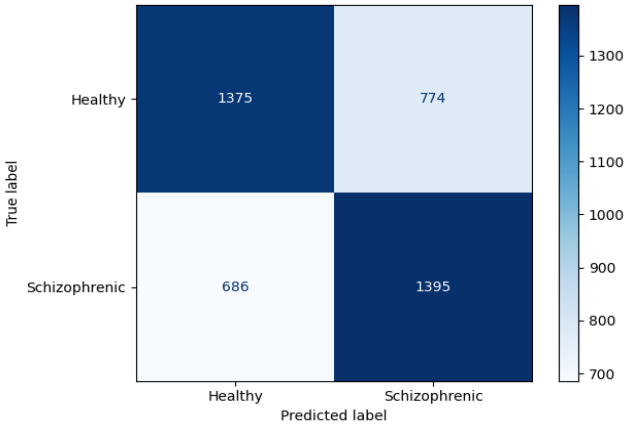

Figure 1: Confusion matrix from first experiment: model training on raw images

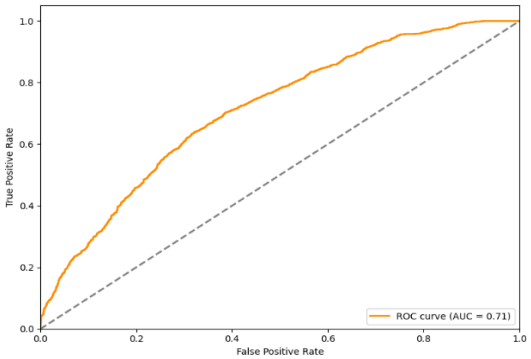

Figure 2: ROC Curve from first experiment: model training on raw images

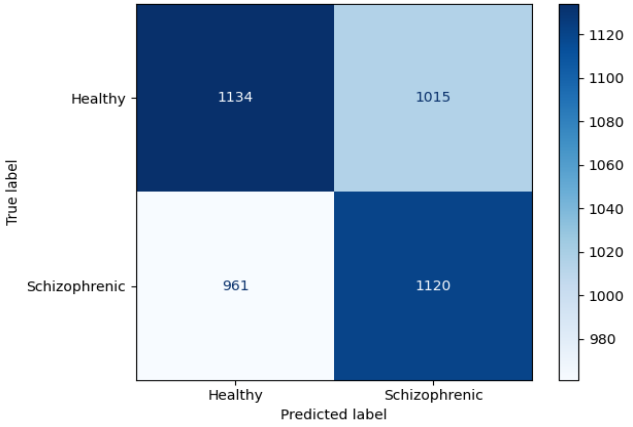

Figure 3: Confusion matrix from second experiment: resampling + normalization

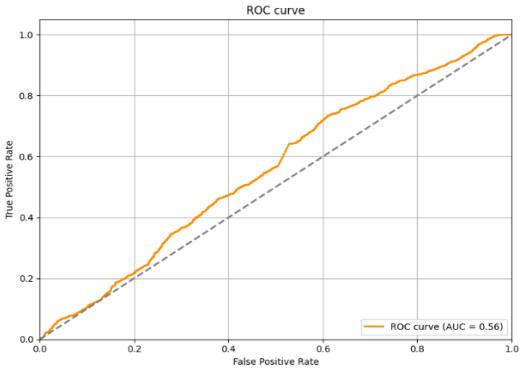

Figure 4: ROC Curve from second experiment: resampling + normalization

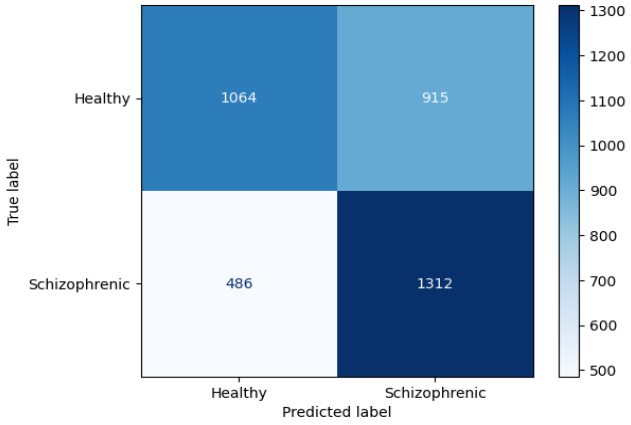

Figure 5: Confusion matrix from third experiment: resampling + normalization + brain extraction

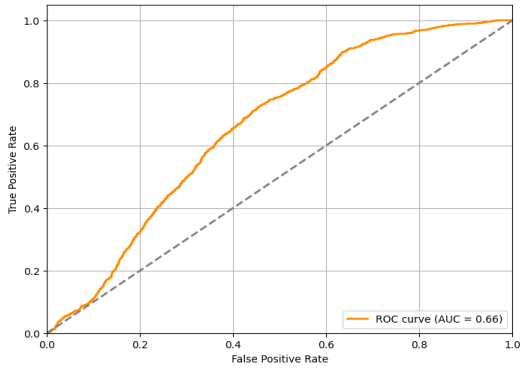

Figure 6: ROC Curve from second experiment: resampling + normalization + brain extraction

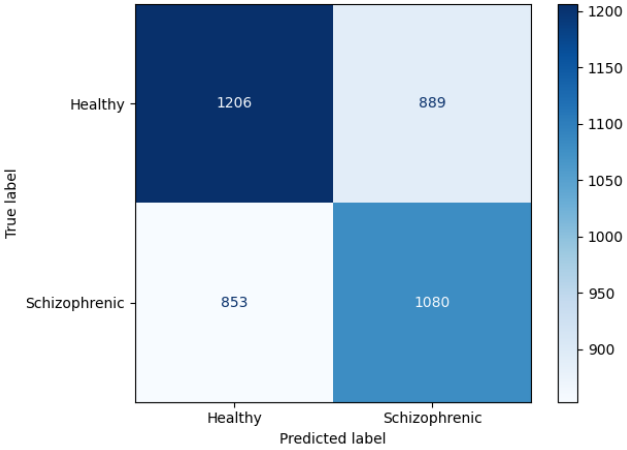

Figure 7: Confusion matrix from fourth experiment: resampling + normalization + brain extraction + cropping

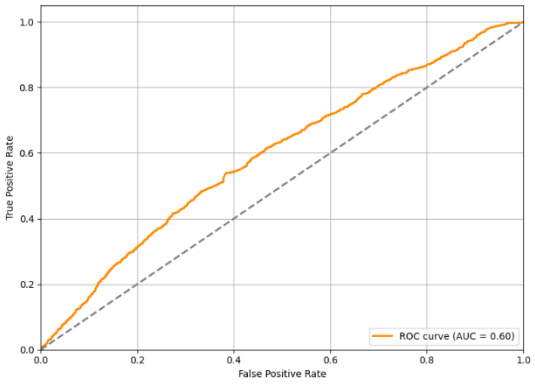

Figure 8: ROC Curve matrix from fourth experiment: resampling + normalization + brain extraction + cropping

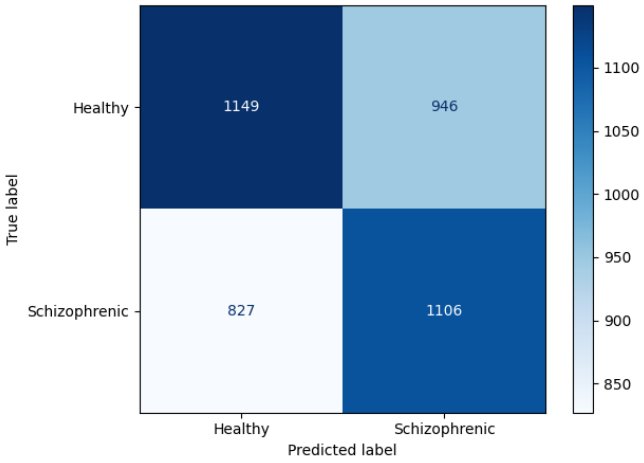

Figure 9: Confusion matrix from fifth experiment: resampling + normalization + brain extraction + cropping + smoothing

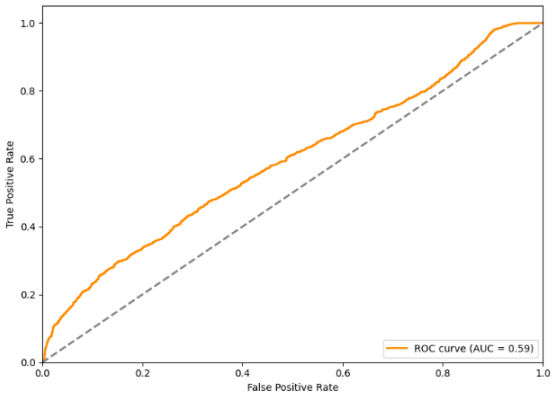

Figure 10: ROC Curve matrix from fifth experiment: resampling + normalization + brain extraction + cropping + smoothing

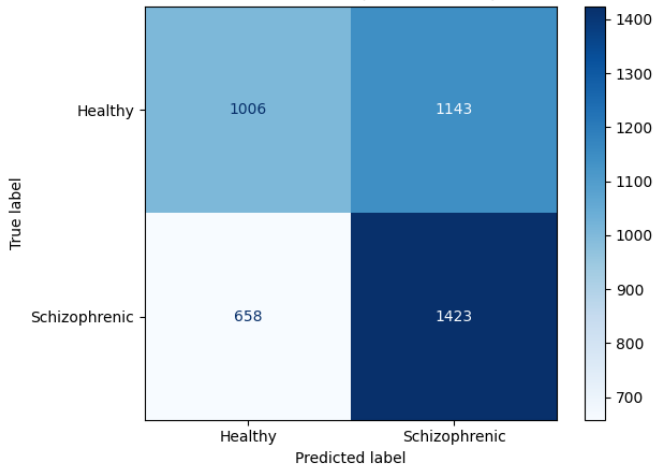

Figure 11: Confusion matrix from sixth experiment: resampling + normalization + brain extraction + smoothing

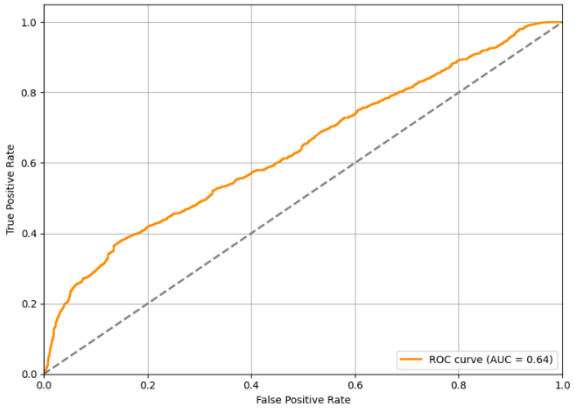

Figure 12: ROC Curve matrix from sixth experiment: resampling + normalization + brain extraction + smoothing

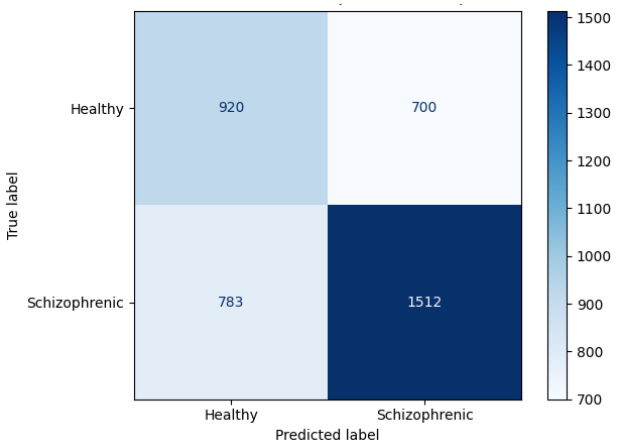

Figure 13: Confusion matrix from seventh experiment: translation

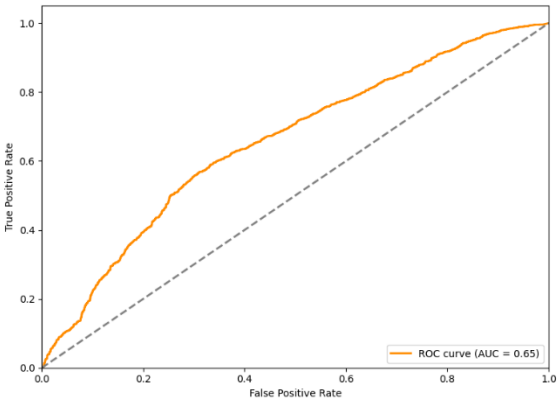

Figure 14: ROC Curve matrix from seventh experiment: translation

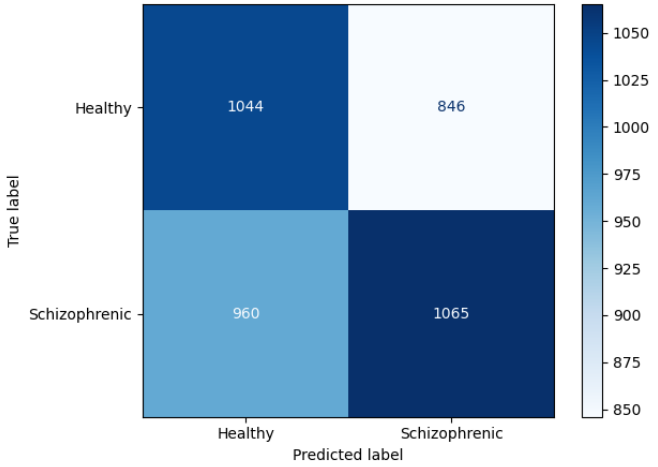

Figure 15: Confusion matrix from eighth experiment: rotation

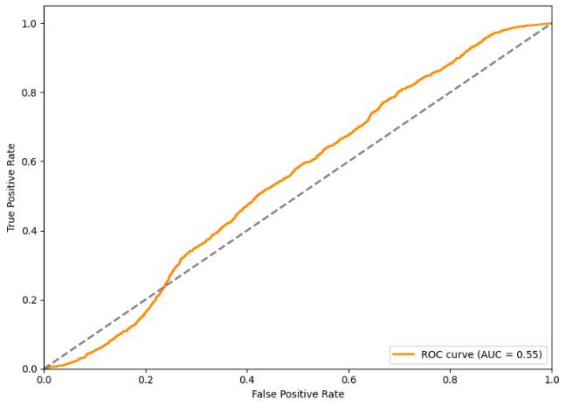

Figure 16: ROC Curve matrix from eighth experiment: rotation

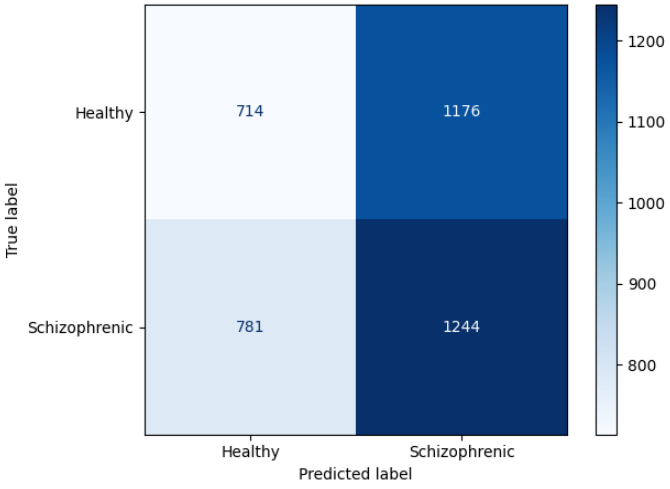

Figure 17: Confusion matrix from ninth experiment: shearing

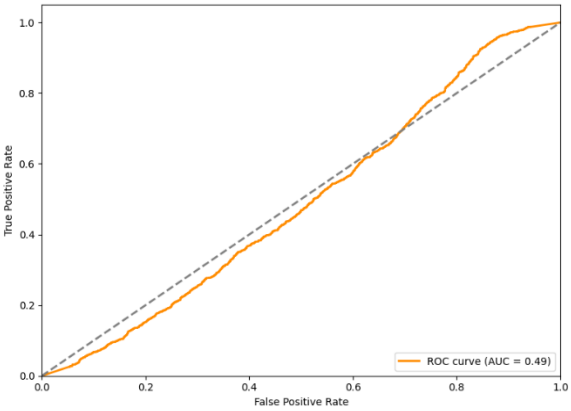

Figure 18: ROC Curve from ninth experiment: shearing

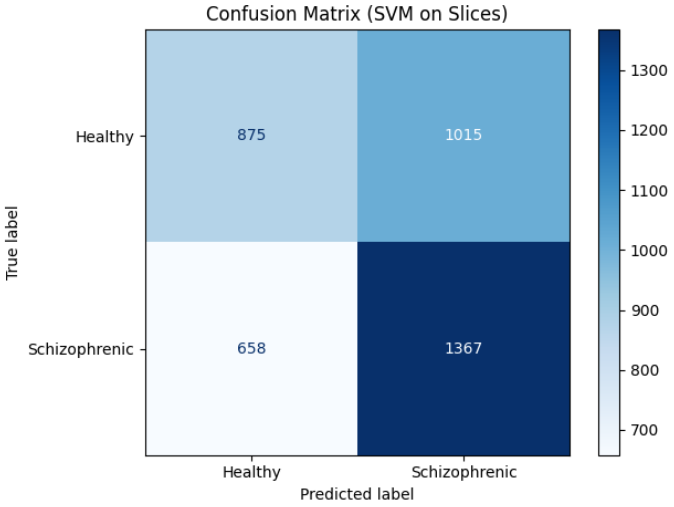

Figure 19: Confusion matrix from tenth experiment: contrast enhancement

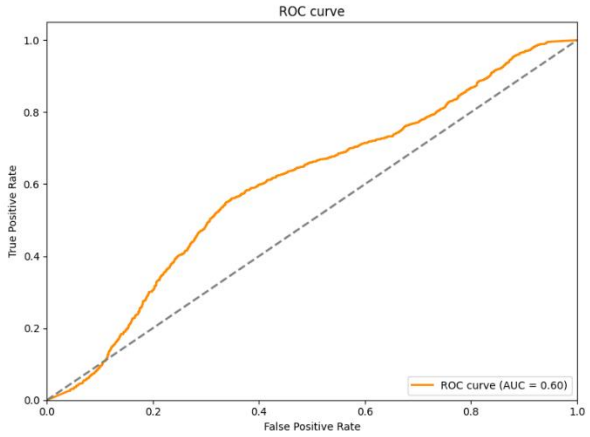

Figure 20: ROC Curve from tenth experiment: contrast enhancement

Section 2: Exploratory Data Analysis (EDA)

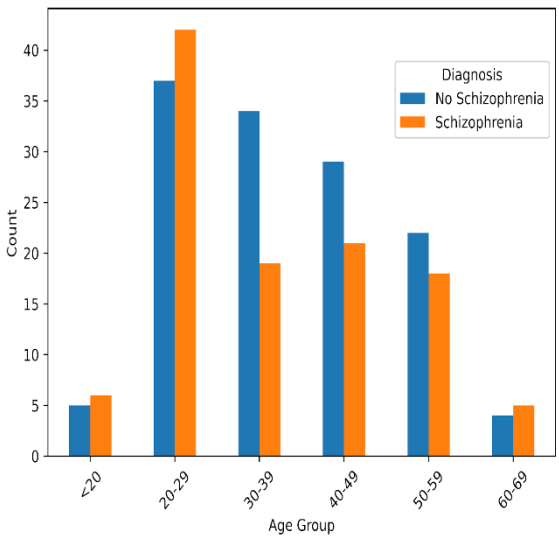

Figure 21: Age distribution of study participants based on diagnosis

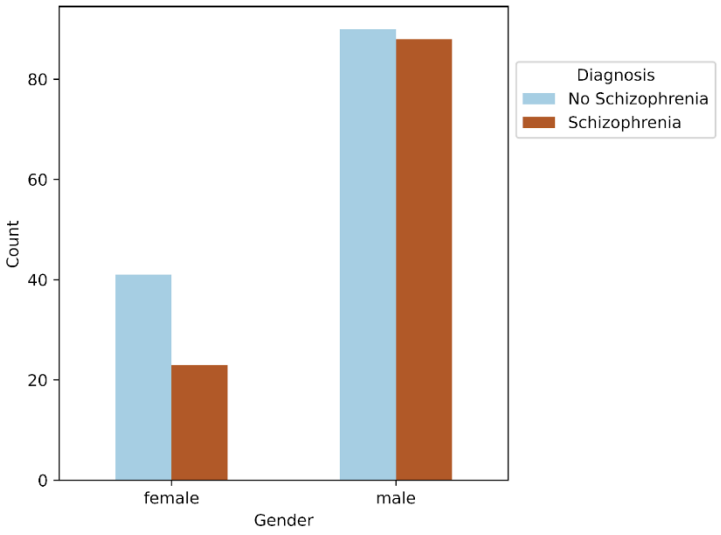

Figure 22: Gender distribution of study participants based on diagnosis

Table 1: Summary of demographic data of subjects

	COBRE		MCICShare		Total	
	SZ (n=79)	HC (n=105)	SZ (n=32)	HC (n=26)	SZ(n=111)	HC (n=131)
Minimum age	19	18	18	19	18	18
Maximum age	66	65	56	60	66	65
Average age	37.78	38.71	32.38	33.12	36.23	37.60
Gender (Male/ Female)	64/15	75/30	24/8	15/11	88/23	90/41

Table 2: Classification performance metrics for different preprocessing and augmentation methods.

Preprocessing / Augmentation Technique	**Accuracy (%)**	**Recall**	**Precision**	**F1-score**
Raw (0)	53	0.54	0.52	0.53
Resampling + Normalization (1+2)	63	0.73	0.59	0.65
Resampling + Normalization + Brain extraction (1 + 2+3)	65	0.67	0.64	0.66
Resampling + Normalization + Brain extraction + Cropping (1+2+3+4)	57	0.56	0.55	0.55

Resampling + Normalization + Brain extraction + Cropping + Smoothing (1+2+3+4+5)	56	0.57	0.54	0.56
Resampling + Normalization + Brain extraction + Smoothing (1+2+3+5)	57	0.68	0.55	0.61
Translation (6)	62	0.66	0.68	0.67
Rotation (7)	54	0.53	0.56	0.54
Shearing (8)	50	0.61	0.51	0.56
Contrast enhancement (9)	57	0.68	0.57	0.62