Ablation Study

a)

SimCLR-SCNN	**BHB internal test**			**BHB external test**		
Augmentations	Age		Sex	Age		Sex
	MAE (↓)	R^2 (↑)	BAcc (↑)	MAE(↓)	R^2 (↑)	BAcc (↑)
SurfBlur	$5.79_{\pm 0.07}$	$0.71_{\pm 0.00}$	$0.70_{\pm 0.01}$	$7.09_{\pm 0.54}$	$0.34_{\pm 0.09}$	$0.61_{\pm 0.01}$
SurfCutOut	$5.25_{\pm 0.06}$	$0.78_{\pm 0.004}$	$0.80_{\pm 0.002}$	$6.49_{\pm 0.28}$	$0.43_{\pm 0.03}$	$0.71_{\pm 0.02}$
SurfNoise	$5.30_{\pm 0.03}$	$0.77_{\pm 0.01}$	$0.81_{\pm 0.01}$	$6.32_{\pm 0.13}$	$0.46_{\pm 0.02}$	$0.70_{\pm 0.01}$

b)

SimCLR-SCNN	**HBN test**				
Augmentations	Age		Sex	FSIQ	
	MAE (↓)	R^2 (↑)	BAcc (↑)	MAE(↓)	R^2 (↑)
SurfBlur	$1.85_{\pm 0.01}$	$0.58_{\pm 0.01}$	$0.70_{\pm 0.01}$	-	-
SurfCutOut	$1.72_{\pm 0.03}$	$0.63_{\pm 0.02}$	$0.78_{\pm 0.02}$	-	-
SurfNoise	$1.76_{\pm 0.02}$	$0.60_{\pm 0.001}$	$0.77_{\pm 0.0046}$	-	-

Additional ablation study results : evaluation of the learned representations using a machine learning linear predictor on different BHB (a)/HBN (b) sets of data, tasks, and metrics. The proposed baseline augmentations (SurfCutOut, SurfBlur and SurfNoise) are evaluated against each other using an unsupervised SimCLR-SCNN framework.