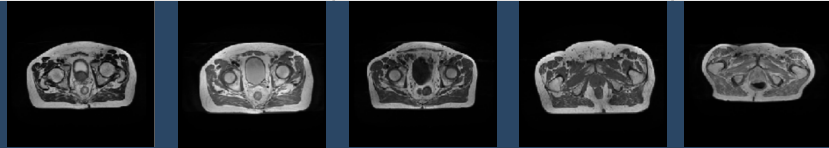


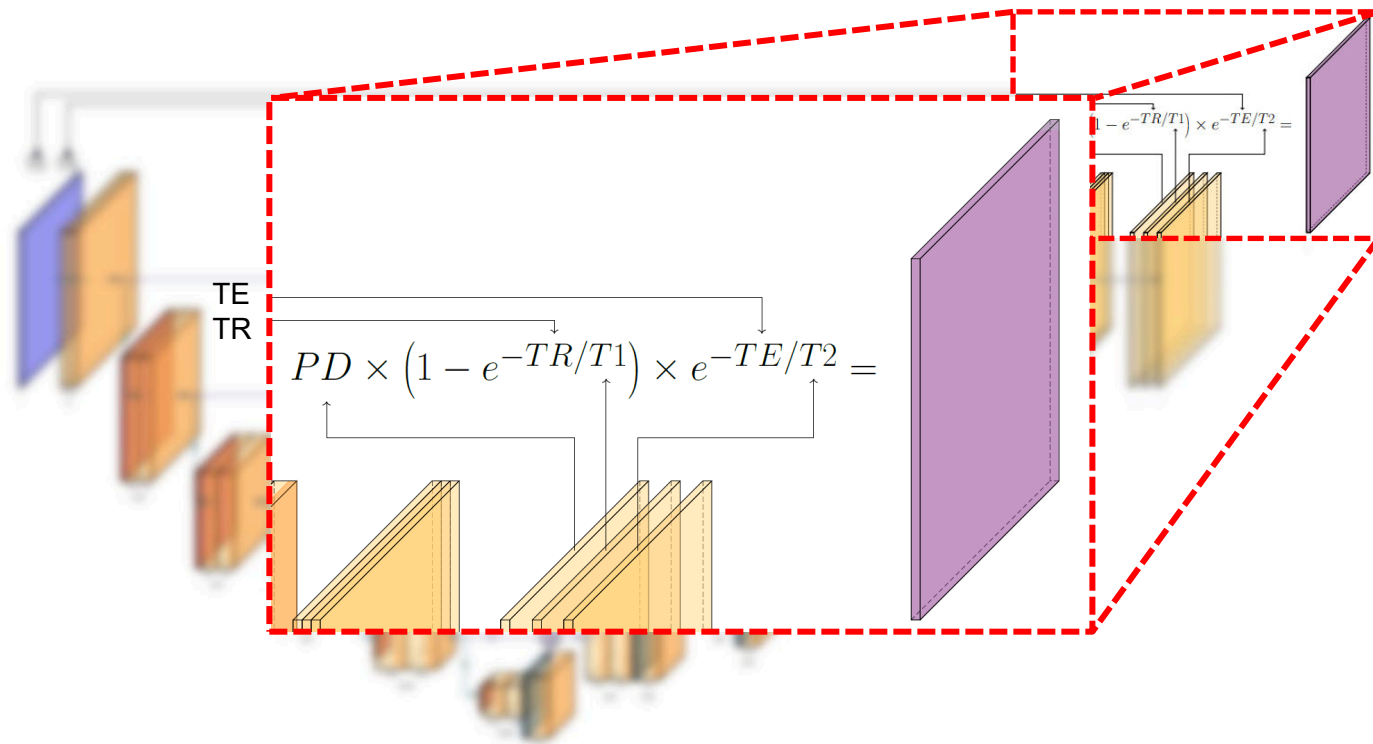
- A categorical GAN is trained to classify MR image contrasts based on their echo (TE) and repetition times (TR)
 - The generator learns to transfer the input image to the selected contrast

Contrast settings					
	T2w		T1w		PDw
TE [ms]	75	120	8	8	8
TR [ms]	4500	4500	400	750	4500

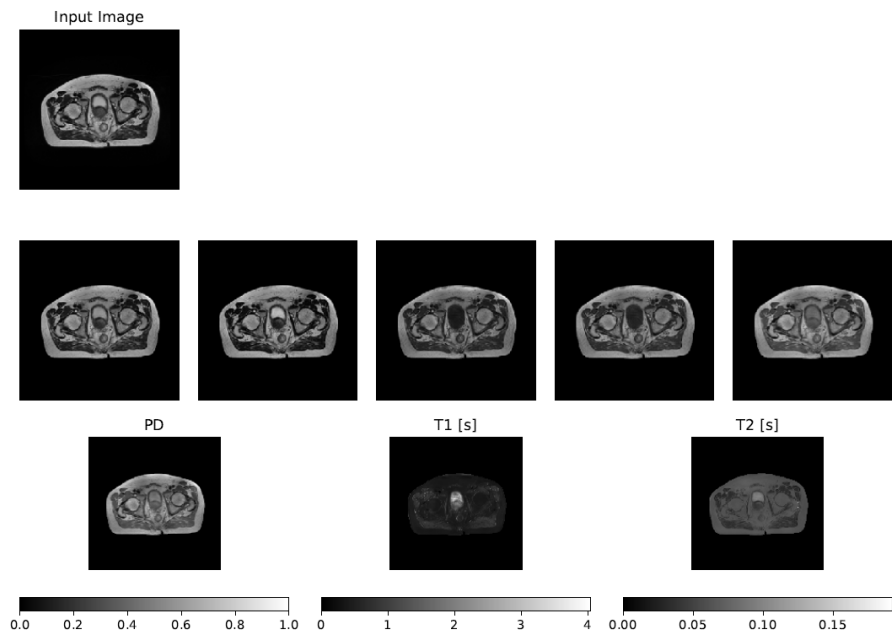
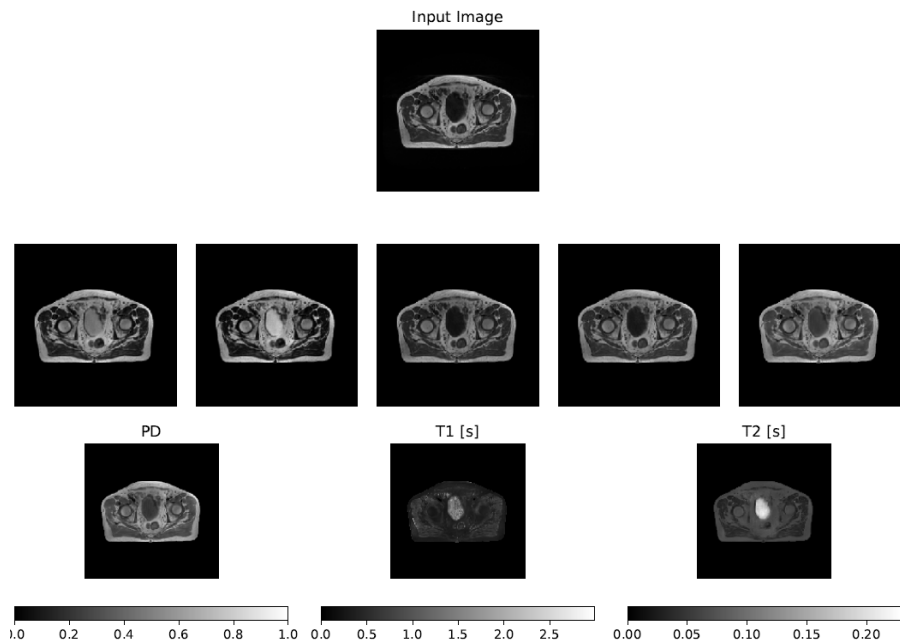


[75,4500]
[120,4500]
[8,400]
[8,750]
[8,4500]
FAKE





- **The target contrast is defined by inputting TE and TR to the generator, used in a physically meaningful final layer, mimicking the signal equation.**
 - **The output of the generator is the signal, however the layer uniquely defines the unknown proton density, T1 and T2 relaxation time maps.**



In a semi-supervised manner using unpaired data only, the generator learns to deconstruct a single MR image into PD, T1 and T2 maps, which can be used to construct signal of any desired contrast.