

Privacy Protection in MRI Scans Using 3D Masked Autoencoders

Lennart A. Van der Goten^{1,2}(✉) and Kevin Smith^{1,2}
for the Alzheimer’s Disease Neuroimaging Initiative**

¹ KTH Royal Institute of Technology, Stockholm, Sweden
{lavdg,ksmith}@kth.se

² SciLifeLab, Solna, Sweden

Table 1: **Vector Quantization Stage.** Hyperparameters

<i>Hyperparameter</i>	128 ³		256 ³	
	<i>Brain</i>	<i>Full Skull</i>	<i>Brain</i>	<i>Full Skull</i>
Kernel size	3	3	3	3
Batch size	8	4	2	1
Learning rate	$3 \cdot 10^{-6}$	$3 \cdot 10^{-6}$	$3 \cdot 10^{-6}$	$3 \cdot 10^{-6}$
Output size s	32	32	64	64
Codebook size	128	512	128	1024
Codebook dim.	32	32	32	32

Table 2: **Latent Modeling Stage.** Hyperparameters

<i>Hyperparameter</i>	128 ³	256 ³
Batch size	16	1
Learning rate	$3 \cdot 10^{-5}$	$3 \cdot 10^{-5}$
Number of base channels	64	96
Number of attention heads	8	12
Attention head dimensions	64	128
Number gradient accumulation steps	1	1
Noise schedule	Cosine	Cosine
Number of time steps	10	10
Number of renoising steps	5	5