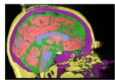# Data Preprocessing

T1w image in native space

Tissue segmentation

Gray Matter   White Matter
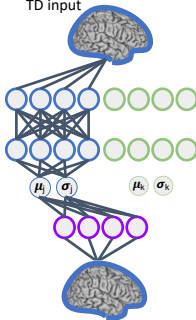
+

Brain Tissue

Subject's brain in Native space (3D Volumetric view)
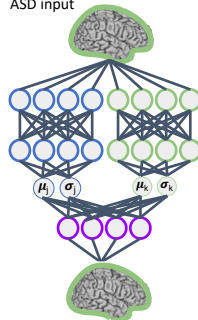
Contrastive autoencoding

Data path for TD input

Data path for ASD input

μ_j σ_j μ_k σ_k

μ_j σ_j μ_k σ_k

TD reconstruction

ASD reconstruction

Convolutional encoders

μ_k σ_k Salient space

Shared decoder

μ_j σ_j Background space

RSA analyses

ASD data input (N=470)

μ_j σ_j μ_k σ_k

Extract subject similarity

BG space   SL space
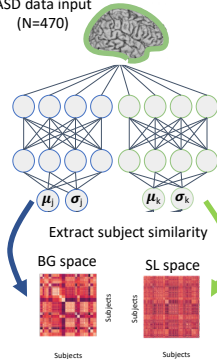
Subjects   Subjects

Subjects   Subjects

RSA models
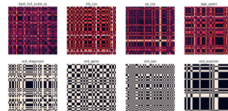
Neuroanatomical Analyses

ASD brain   ASD brain

μ_j σ_j μ_k σ_k μ_j σ_j 0 0
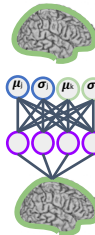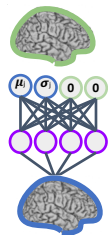
Full reconstruction   Reconstruction of TD features only

Identification of ASD features

ASD brain   TD features

= +

Spatial normalization TD -> ASD