

A

Raw mRNA counts (UMI)

Cell	Gene1	Gene2	Gene3	Gene4
ATCG	0	9	0	0
AGTG	8	0	0	0
ATTC	0	7	12	2
CAGT	0	0	1	5



B

Cell Distance Matrix (Native)

	ATCG	AGTG	ATTC	CAGT
ATCG	0	12	12	10
AGTG	12	0	16	9
ATTC	12	16	0	13
CAGT	10	9	13	0

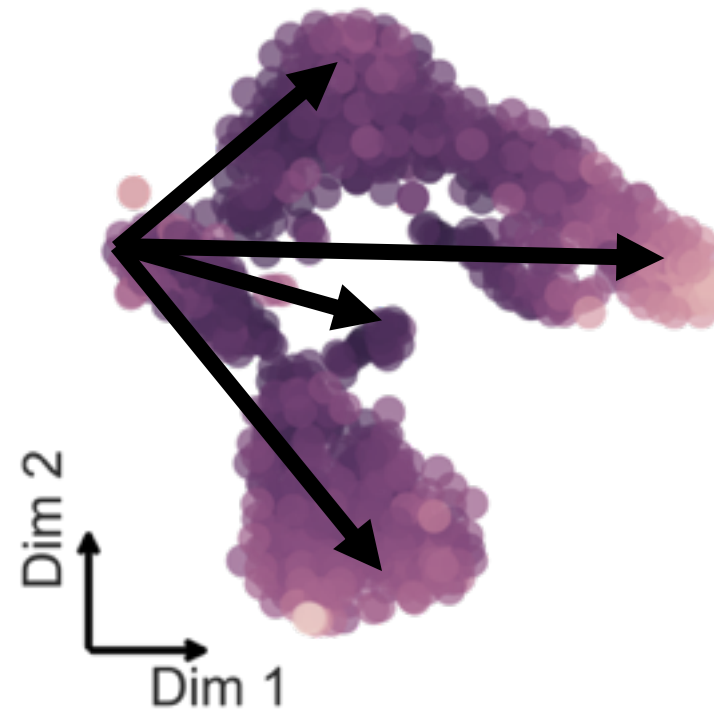
Knn Graph (Native)

	ATCG	AGTG	ATTC	CAGT
ATCG	0	0	1	0
AGTG	1	0	0	1
ATTC	0	0	0	0
CAGT	1	1	0	0

C

Reduced Dimensions

Cell	Dim1	Dim2
ATCG	10	25
AGTG	24	13
ATTC	22	7
CAGT	15	3



Cell Distance Matrix (Latent)

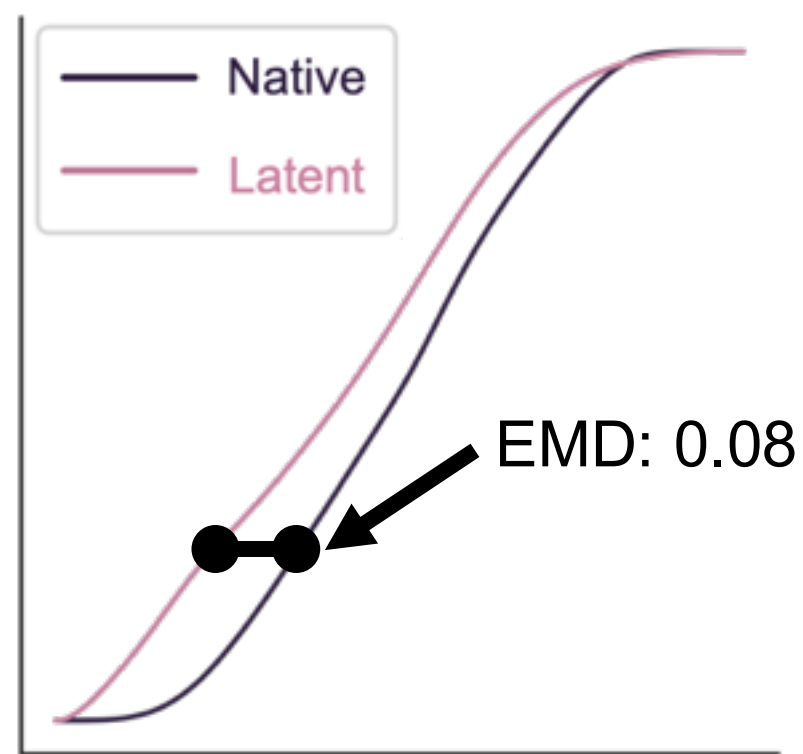
	ATCG	AGTG	ATTC	CAGT
ATCG	0	18	22	23
AGTG	18	0	6	13
ATTC	22	6	0	8
CAGT	23	13	8	0

Knn Graph (Latent)

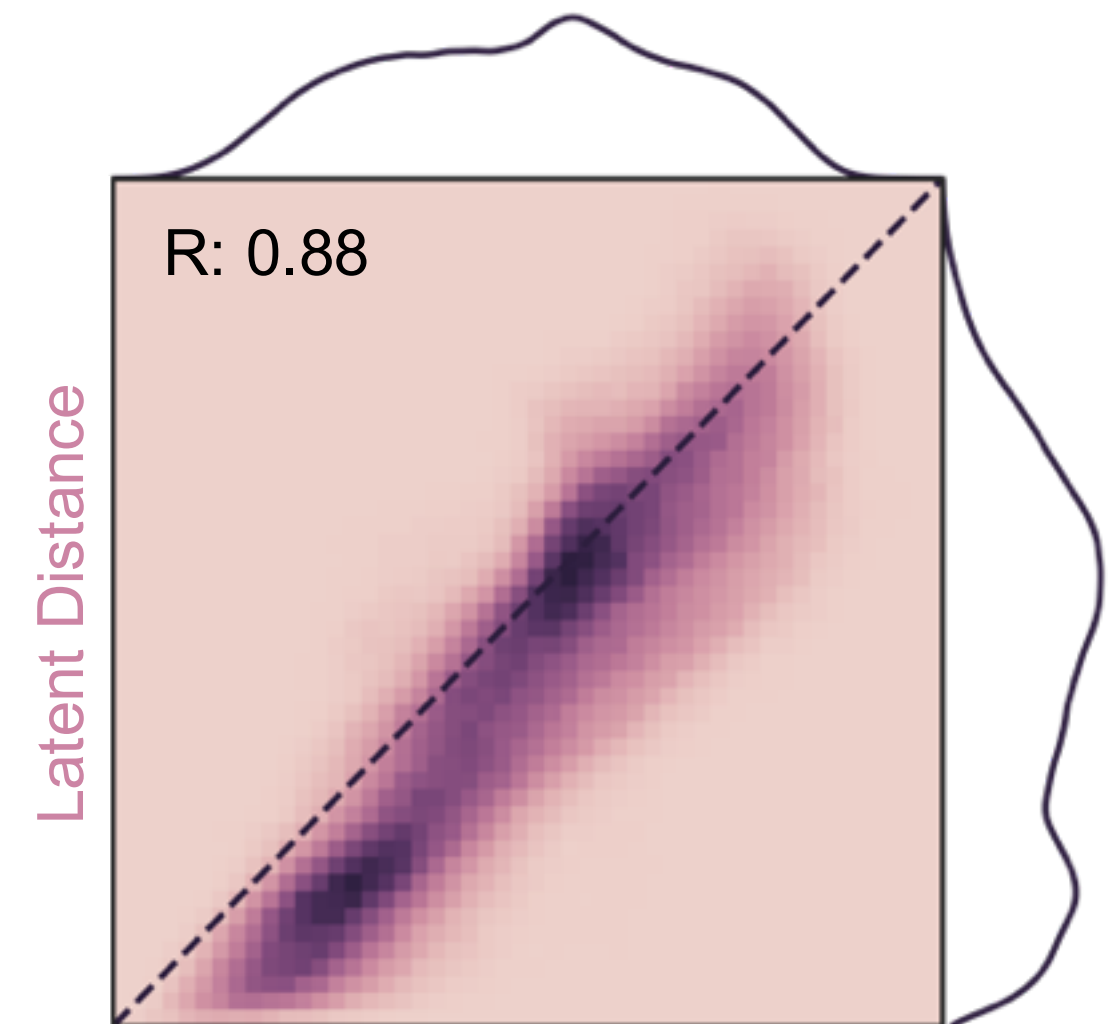
	ATCG	AGTG	ATTC	CAGT
ATCG	0	0	0	0
AGTG	1	0	1	0
ATTC	0	1	0	1
CAGT	0	0	0	0

D

Knn Preservation: 97.2 %



Cumulative Distance Dist.



Native Distance