

# Supplementary Material

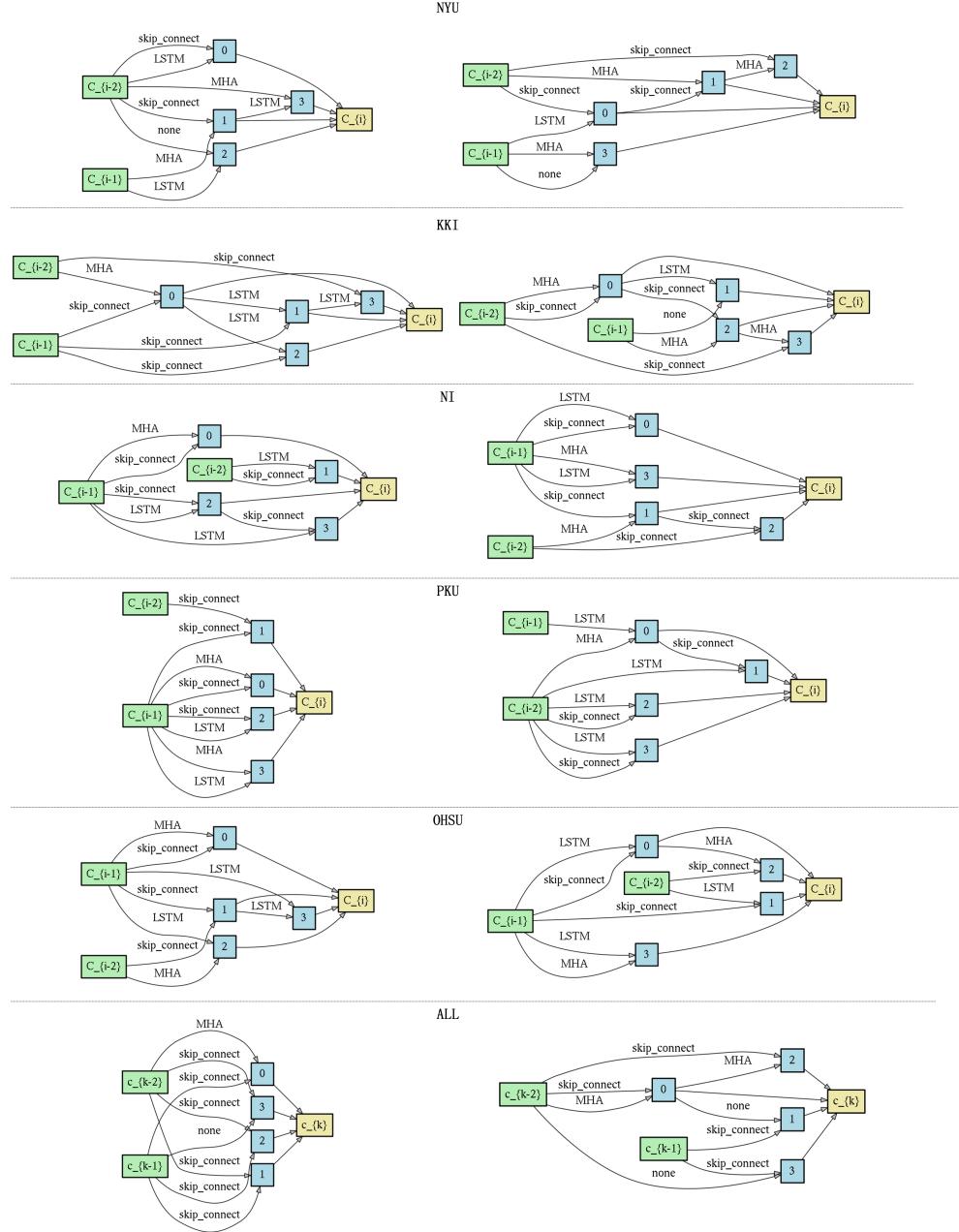


Fig. 1. Cell structures search based on each site. The left and right sides of the figure show the S-cell and the D-cell structure, respectively.



Fig. 2. The OR tested on the remaining sites using the model trained on NYU, KKI, PKU, NI, and OHSU, respectively, where purple is SPAE and red is SP-NAS.



Fig. 3. The diagnosis accuracy tested on the remaining sites using the model trained on NYU, KKI, PKU, NI, and OHSU, respectively, where purple is SPAE and red is SP-NAS.

TABLE I

THE OR OF FBN OBTAINED FROM DIFFERENT METHODS VS. TEMPLATE BY THE NYU DATASET. IT IS WORTH NOTING THAT THE NUMBERS IN RED IN ALL TABLES REFER TO WHERE THE MAXIMUM VALUE IS LOCATED.

RSN	0	1	2	3	4	5	6	7	8	9	Avg
a-op1	<b>0.717</b>	<b>0.579</b>	0.540	0.524	0.438	0.640	0.581	0.492	<b>0.605</b>	0.590	<b>0.571</b>
a-op2	0.413	0.490	0.439	<b>0.585</b>	0.233	0.561	0.562	0.440	0.471	<b>0.593</b>	0.479
a-op3	-	-	-	-	-	-	-	-	-	-	-
b-op1	0.678	0.424	0.555	0.464	0.317	0.560	0.562	0.403	0.349	0.343	0.465
b-op2	0.587	0.494	<b>0.558</b>	0.496	<b>0.469</b>	<b>0.669</b>	<b>0.583</b>	0.482	0.533	0.468	0.534
c-op3	0.373	0.322	0.426	0.526	0.340	0.476	0.444	<b>0.581</b>	0.400	0.344	0.423

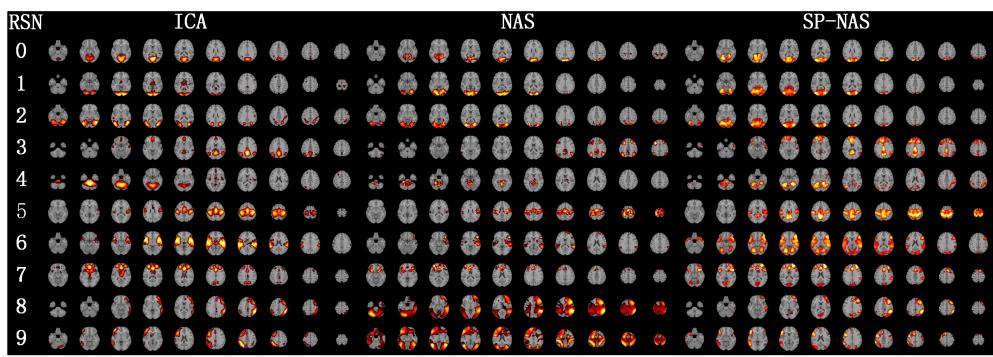


Fig. 4. Visualization of FBNs obtained by NAS method and SP-NAS method on NYU dataset.

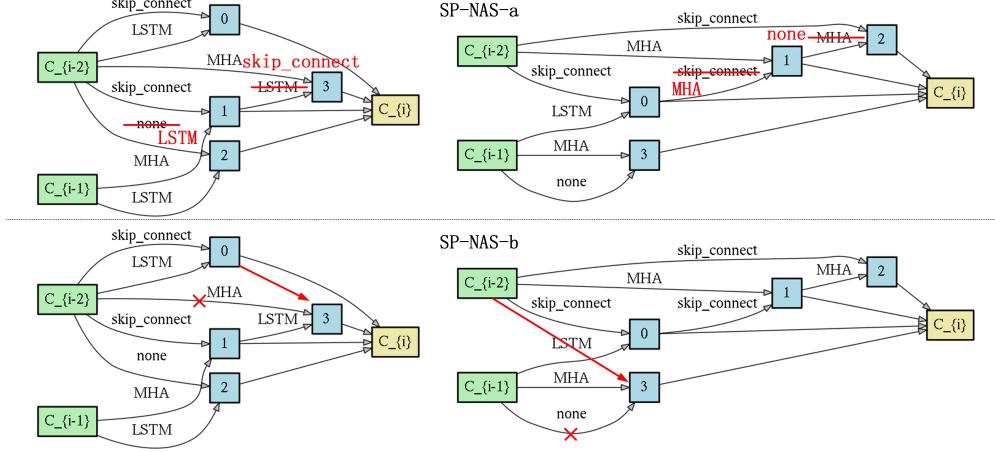


Fig. 5. Two cell structures for architecture effectiveness verification. The left and right sides are the S-cell structure and the D-cell structure, respectively.

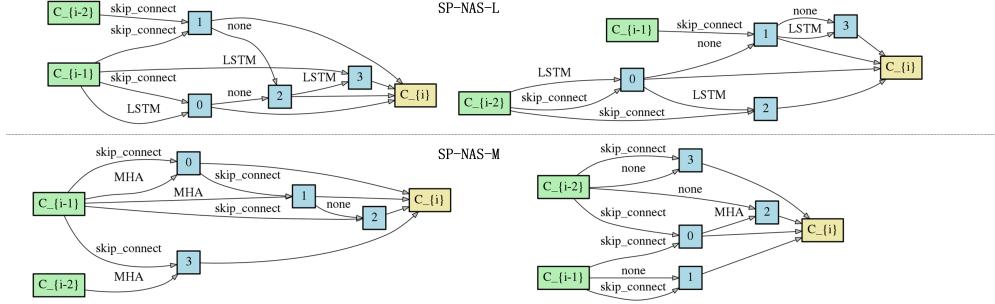


Fig. 6. Two cell structures for search space effectiveness verification. The left and right sides are the S-cell structure and the D-cell structure, respectively.

TABLE II

THE ORS OF THE TEMPLATE AND FBNs OBTAINED FROM SP-NAS-A, SP-NAS-B AND SP-NAS BY THE NYU DATASET.

RSN	0	1	2	3	4	5	6	7	8	9	Avg
SP-NAS-a	0.673	0.480	<b>0.670</b>	<b>0.601</b>	0.333	0.611	<b>0.673</b>	0.477	0.537	0.460	0.551
SP-NAS-b	0.540	0.448	0.561	0.436	0.377	0.589	0.635	0.445	0.367	0.380	0.478
SP-NAS	<b>0.717</b>	<b>0.579</b>	0.540	0.524	<b>0.438</b>	<b>0.640</b>	0.581	<b>0.492</b>	<b>0.605</b>	<b>0.590</b>	<b>0.571</b>

TABLE III

THE ORS OF THE TEMPLATE AND FBNs OBTAINED FROM SP-NAS-L, SP-NAS-M, AND SP-NAS BY THE NYU DATASET.

RSN	0	1	2	3	4	5	6	7	8	9	Avg
SP-NAS-L	0.506	0.447	0.457	<b>0.565</b>	0.335	0.546	0.500	0.414	0.331	0.346	0.445
SP-NAS-M	0.632	0.572	0.535	0.541	0.404	0.579	<b>0.728</b>	<b>0.556</b>	0.536	0.390	0.547
SP-NAS	<b>0.717</b>	<b>0.579</b>	<b>0.540</b>	0.524	<b>0.438</b>	<b>0.640</b>	0.581	0.492	<b>0.605</b>	<b>0.590</b>	<b>0.571</b>