

# A title is all you need

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# Contents

1	Introduction . . . . .	1
1.1	Sex difference . . . . .	1
1.2	Functional Connectivity . . . . .	1
1.3	Neural Network . . . . .	1
2	Materials and methods . . . . .	1
2.1	Human Connectome Project (HCP) . . . . .	1
2.2	Data Preprocessing . . . . .	1
2.3	Linear discriminant analysis (LDA) . . . . .	2
2.4	SVM Model . . . . .	8
2.5	CNN Model . . . . .	8
3	Results . . . . .	10
4	Discussion . . . . .	10

# 1 Introduction

## 1.1 Sex difference

## 1.2 Functional Connectivity

## 1.3 Neural Network

# 2 Materials and methods

## 2.1 Human Connectome Project (HCP)

## 2.2 Data Preprocessing

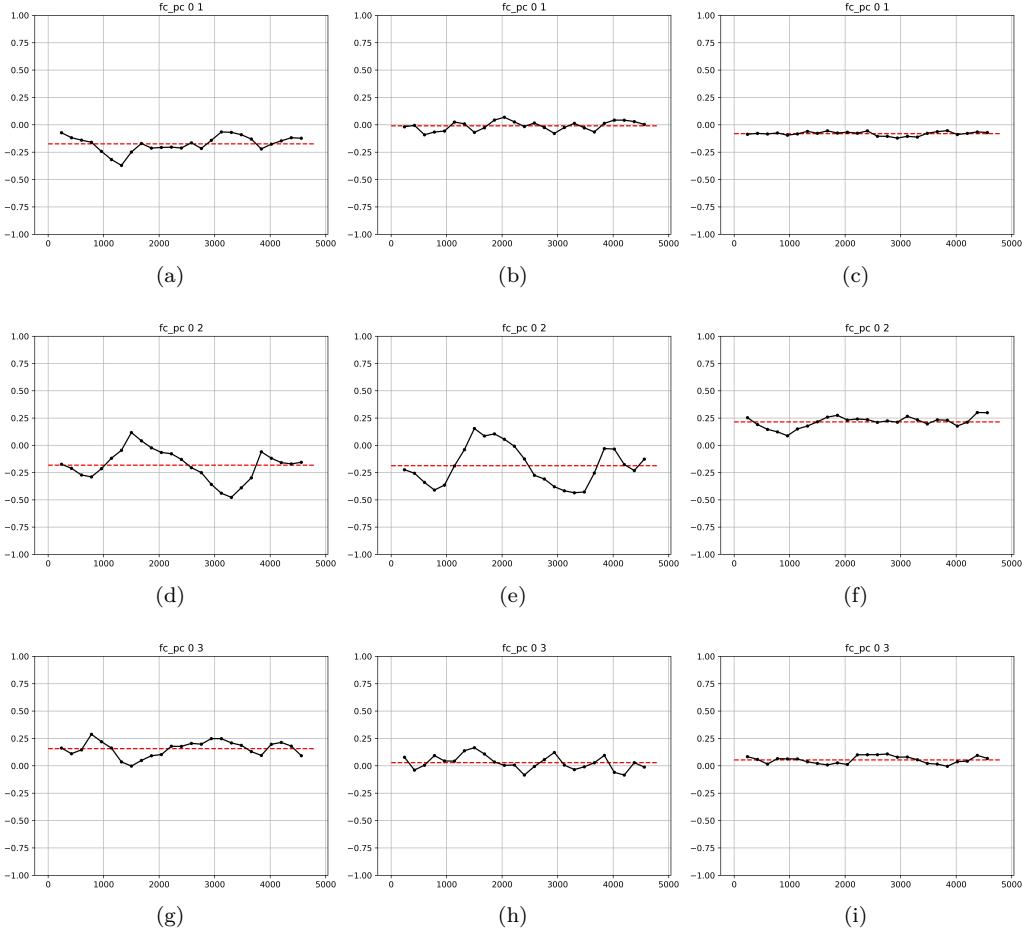
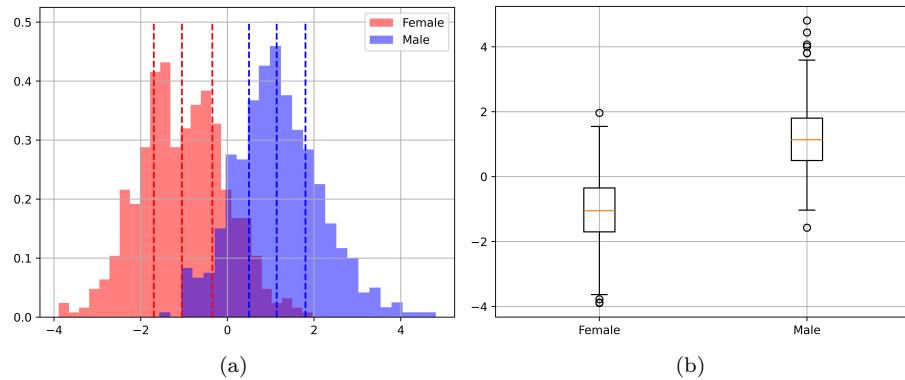


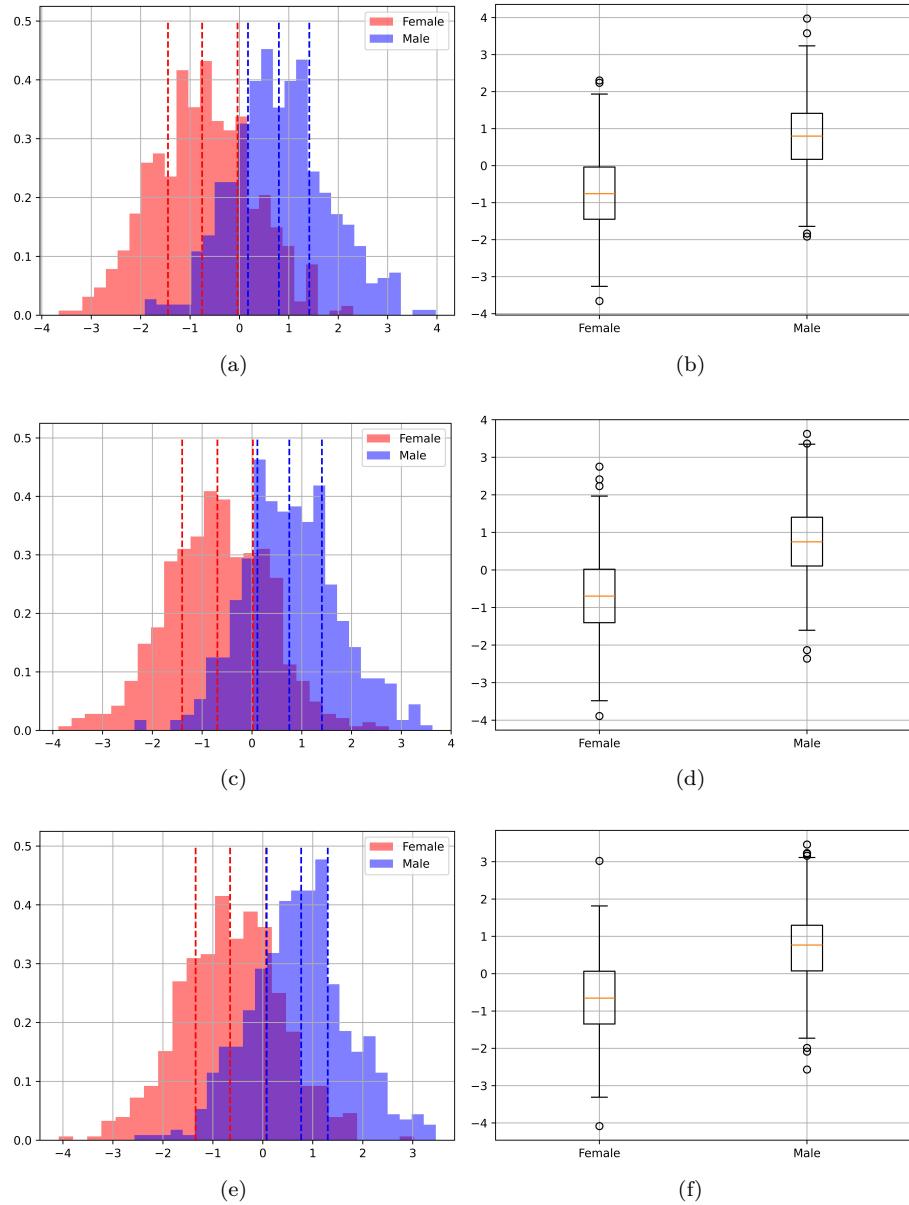
Figure 1: Dynamic connectivity with  $N_{node} = 15, 25, 50$ .

	min	mean	max
$N_{node} = 15$	1.366036853342154e-05	2.533653786919024e-05	6.491661970661407e-05
$N_{node} = 25$	5.204765189263073e-06	9.253529597727324e-06	1.935569050475904e-05
$N_{node} = 50$	1.0647490177903414e-07	9.65062448973428e-07	2.054828236469856e-06

Table 1: Variance

### 2.3 Linear discriminant analysis (LDA)

Figure 2: LDA for static connectivity with  $N_{node} = 15$ .

Figure 3: LDA for Dynamic connectivity with  $N_{node} = 15$ .

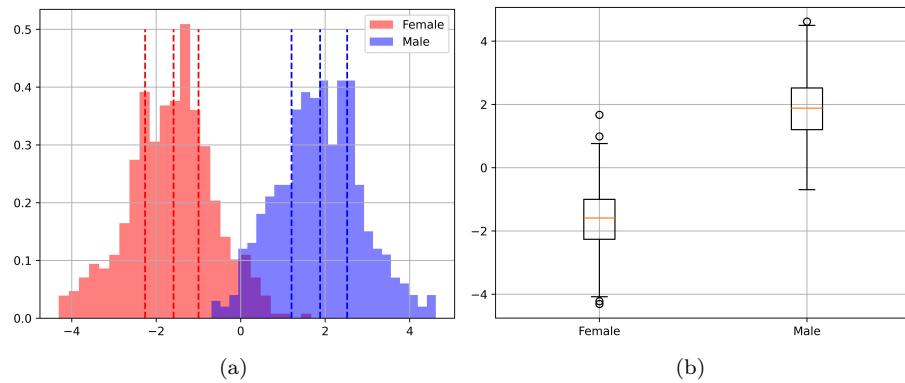
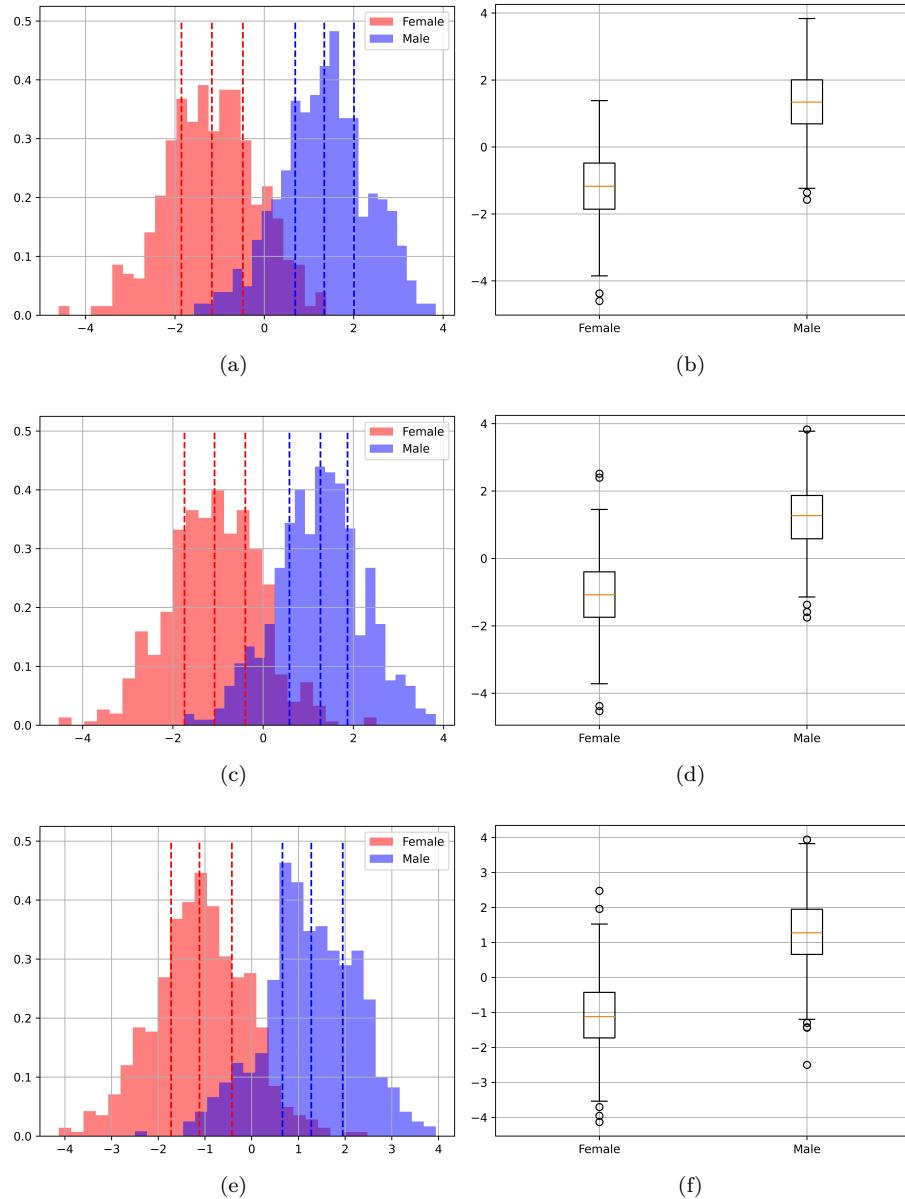


Figure 4: LDA for static connectivity with  $N_{node} = 25$ .

Figure 5: LDA for Dynamic connectivity with  $N_{node} = 25$ .

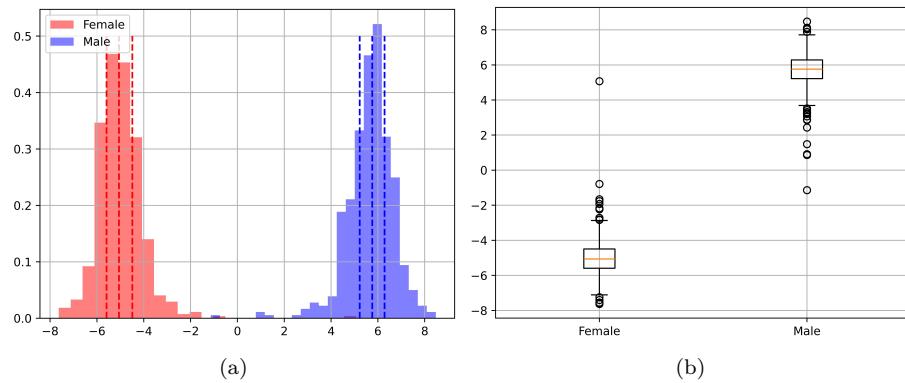
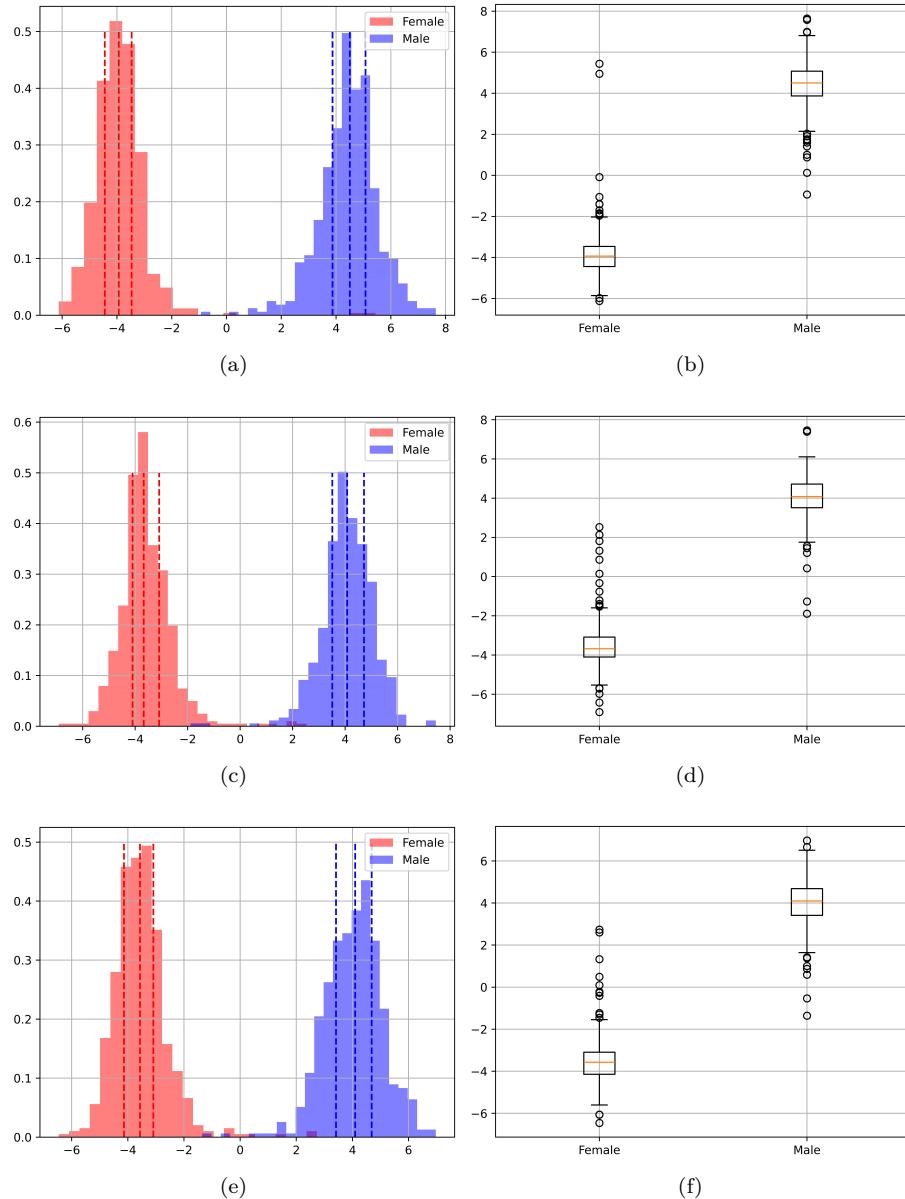
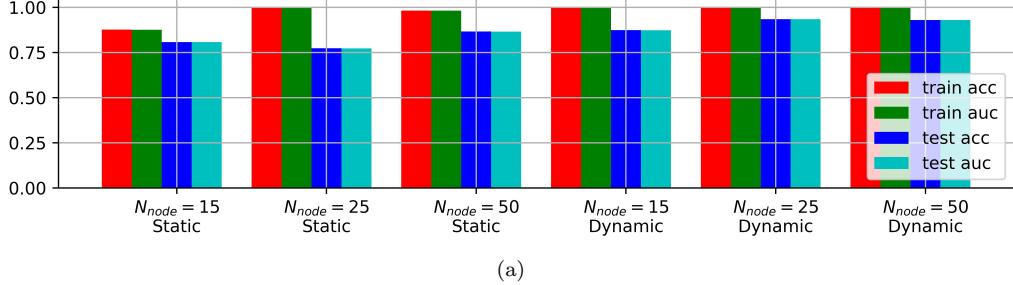


Figure 6: LDA for static connectivity with  $N_{node} = 50$ .

Figure 7: LDA for Dynamic connectivity with  $N_{node} = 50$ .

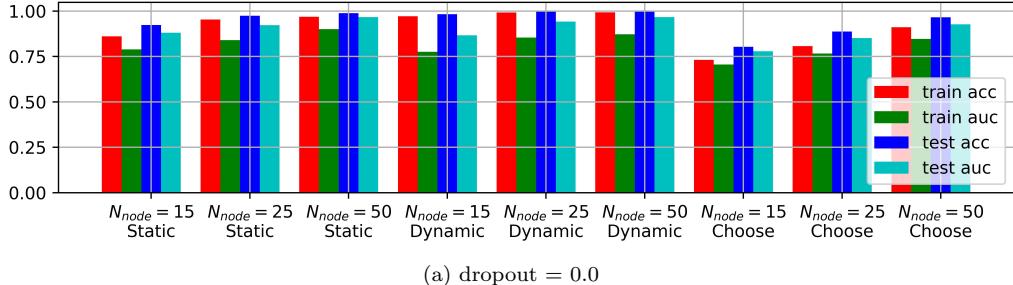
## 2.4 SVM Model



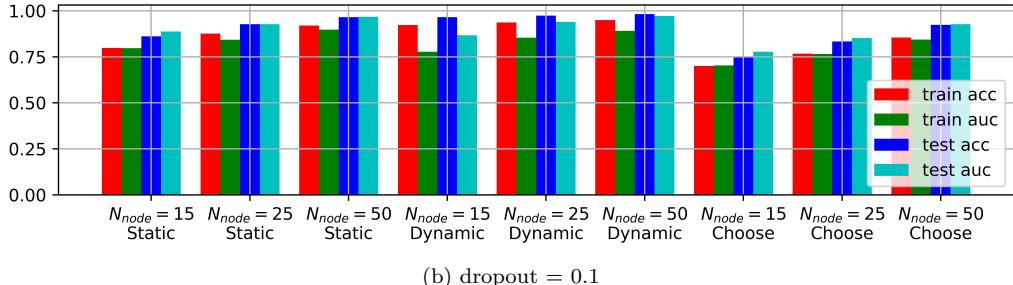
(a)

Figure 8: Results of SVM model.

## 2.5 CNN Model

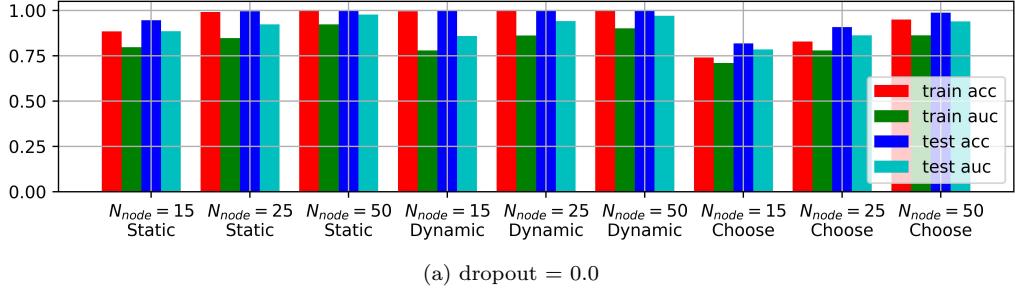


(a) dropout = 0.0

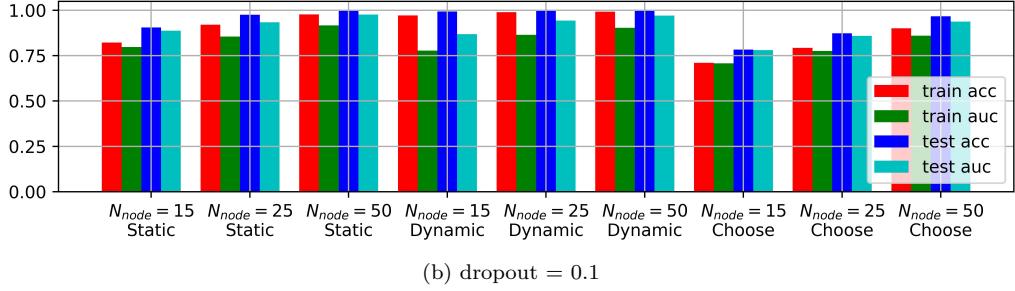


(b) dropout = 0.1

Figure 9: Results of CNN model with channel = 1.

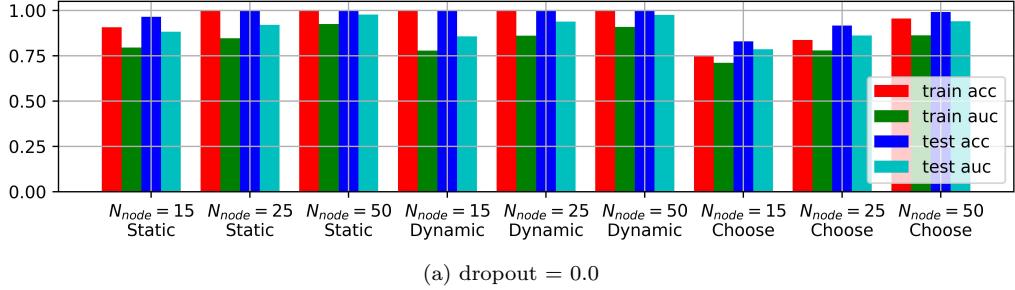


(a) dropout = 0.0

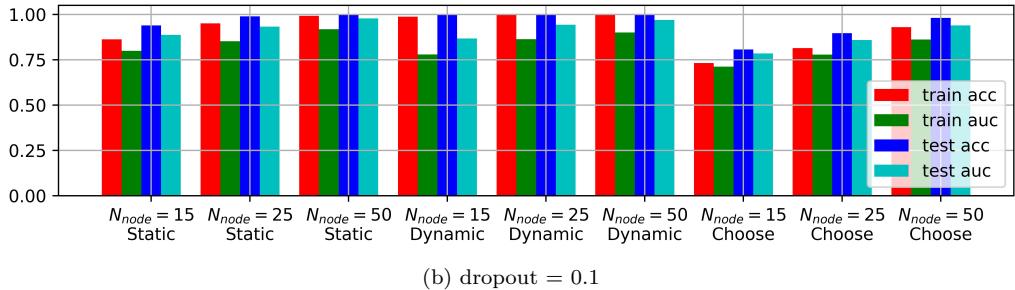


(b) dropout = 0.1

Figure 10: Results of CNN model with channel = 2.



(a) dropout = 0.0



(b) dropout = 0.1

Figure 11: Results of CNN model with channel = 4.

**3 Results****4 Discussion**