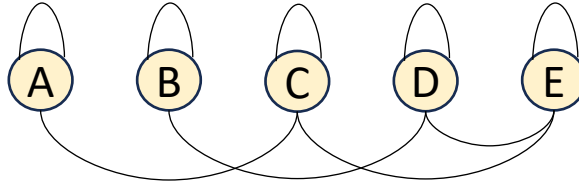


Graph Convolutional Network

Graph Data



Graph Convolutional Network

	A	B	C	D	E
A	2	0	1	0	1
B	1	1	0	0	0
C	0	0	-1	1	1
D	0	3	0	1	0
E	1	1	1	1	1

1	1	0	0	0
0	1	0	-1	0
1	0	0	1	-1

[ReLU]

3	1	1	0	1
1	2	0	1	0
1	2	0	0	0

Messages

0	1	1	0
1	-1	0	-2
1	0	0	0

[ReLU]

	A	B	C	D	E
A	1		1		
B		1		1	
C	1		1		1
D		1		1	1
E			1	1	1

Adjacency Matrix

A	B	C	D	E
1		1		
	1		1	
1		1		1
	1		1	1
		1	1	1

4	1	5	2	2
1	6	1	0	0
1	2	1	2	0

2	2	2	2	0
2	2	2	0	0
4	1	5	2	2

Messages

4	4	6	6	6
2	0	2	0	2
9	3	11	5	9

1 1 1 1 1

There's a mistake in the solution here, so everything afterwards is different.

Fully Connected Network

1	0	0	-2
0	1	0	-2
0	0	1	-5
1	-1	0	0
1	0	-1	0

[ReLU]

2	2	4	4	4
0	2	0	2	0
4	2	6	0	4
2	4	4	6	4
5	1	2	1	2

1 1 1 1 1

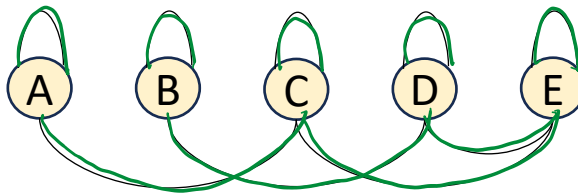
1	1	1	1	1	-9
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7	-2	5	2	3
---	----	---	---	---

0.7 0.8 0.8 0.8 1

Graph Convolutional Network

Graph Data



Graph
Convolutional
Network

	A	B	C	D	E
A	1	0	1	0	1
B	2	1	0	0	0
C	1	1	0	0	0
D	0	0	-1	1	1
E	0	3	0	1	0

Adjacency
Matrix

A	B	C	D	E
1	0	1	0	0
0	1	0	1	0
1	1	0	0	0
0	0	1	1	1
0	3	0	1	0

1	1	0	0	0
0	1	0	-1	0
1	0	0	1	-1

[ReLU]

3	1	1	0	1
0	1	-2	0	0
1	2	0	0	0

Messages

0	1	1	0
1	-1	0	-2
1	0	0	0

[ReLU]

1	3	1	3	0
2	-2	3	-1	-1
4	1	5	2	1

Messages

2	6	2	6	4
5	0	5	0	3
9	3	10	4	8

1 1 1 1 1

Fully
Connected
Network

1	0	0	-2
0	1	0	-2
0	0	1	-5
1	-1	0	0
1	0	-1	0

[ReLU]

1	1	1	1	1	-9
---	---	---	---	---	----

0	4	0	4	2
3	-2	3	-2	1
2	-4	3	-1	1
-3	6	-3	6	1
-7	3	8	2	4

1 1 1 1 1

-4	4	5	3	0
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σ 0 1 1 1 0.5