University of Central Florida

Department of Computer Science

CDA 5106: Fall 2021

Machine Problem 2: Branch Prediction

by

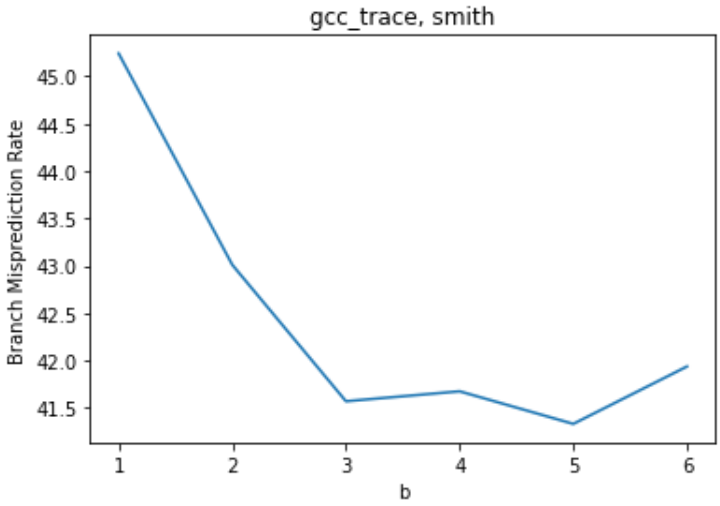
Lawrence Oks

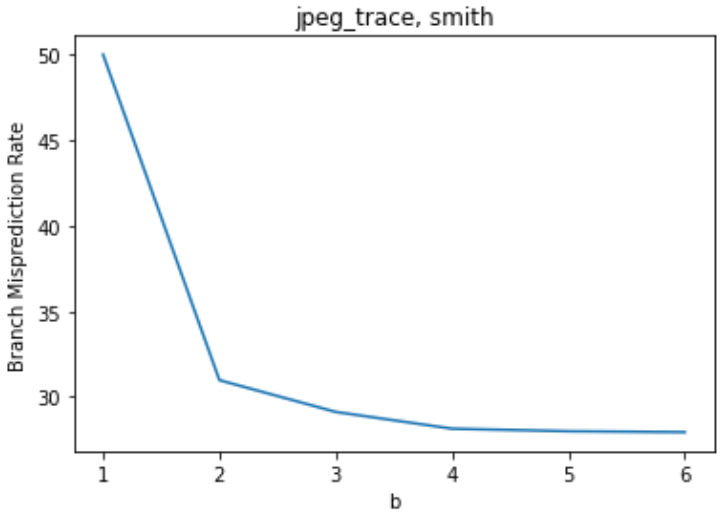
Honor Pledge: "I have neither given nor received unauthorized aid on this test or assignment."

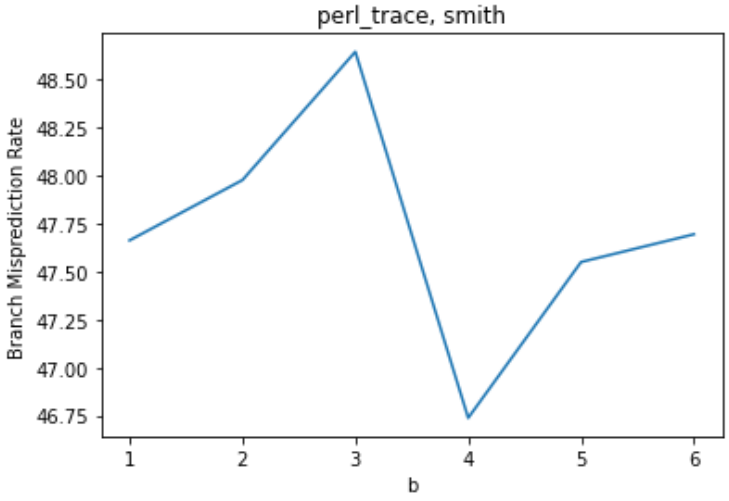
Student's electronic signature: Lawrence Oks .

(sign by typing your name)

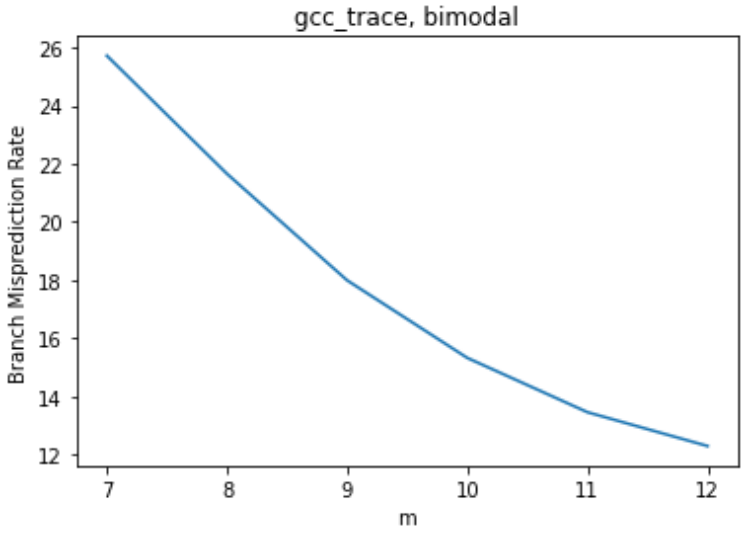
7.1.c Smith

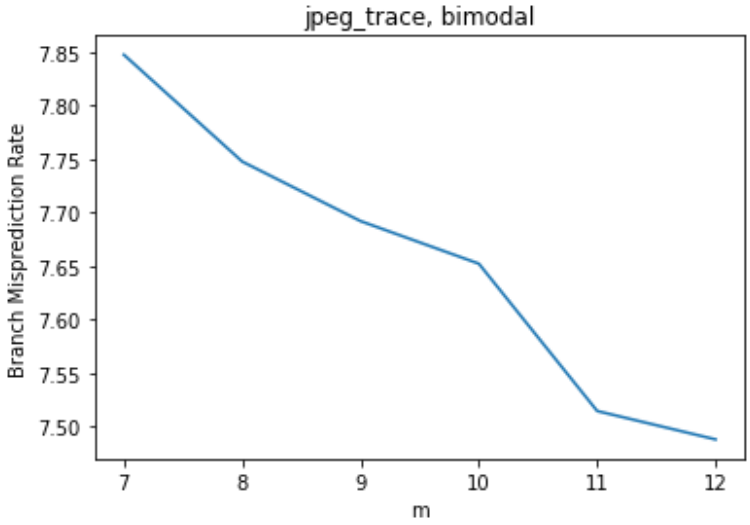

gcc_trace, smith
Branch Misprediction Rate
45.0
44.5
44.0
43.5
43.0
42.5
42.0
41.5
1
2
3
4
5
6
b

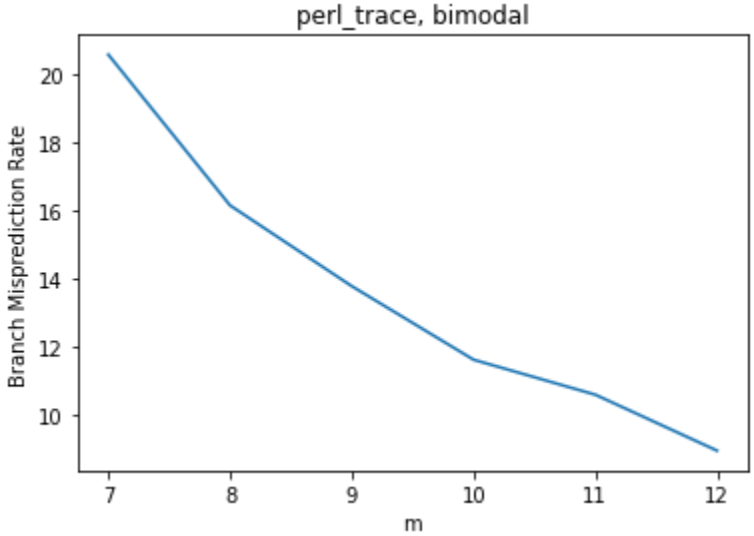

jpeg_trace, smith
Branch Misprediction Rate
50
45
40
35
30
1
2
3
4
5
6
b


perl_trace, smith
Branch Misprediction Rate
48.50
48.25
48.00
47.75
47.50
47.25
47.00
46.75
1
2
3
4
5
6
b

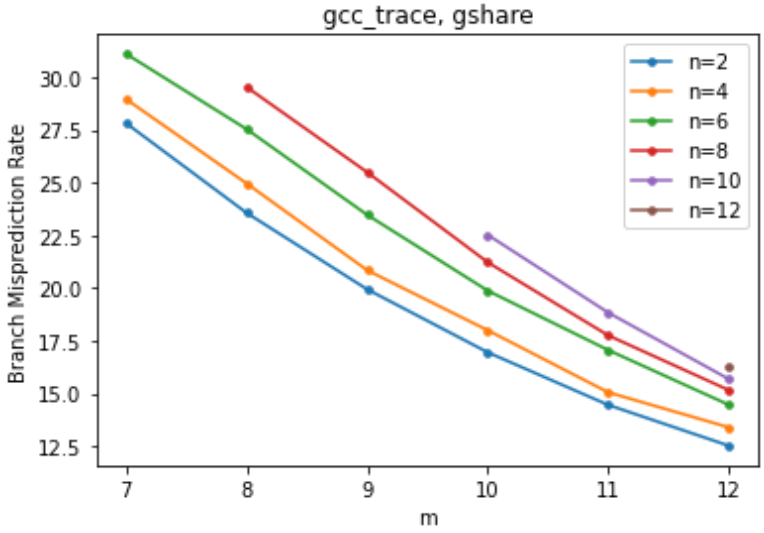
7.2.e Bimodal

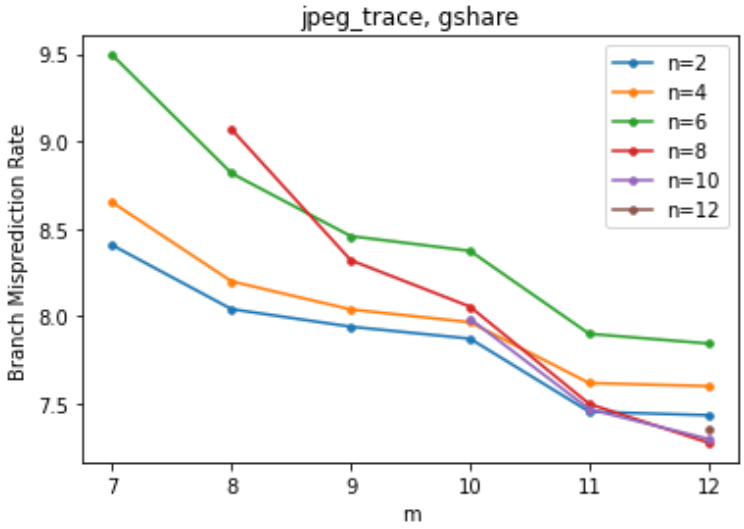

gcc_trace, bimodal
Branch Misprediction Rate
m
26
24
22
20
18
16
14
12
7
8
9
10
11
12

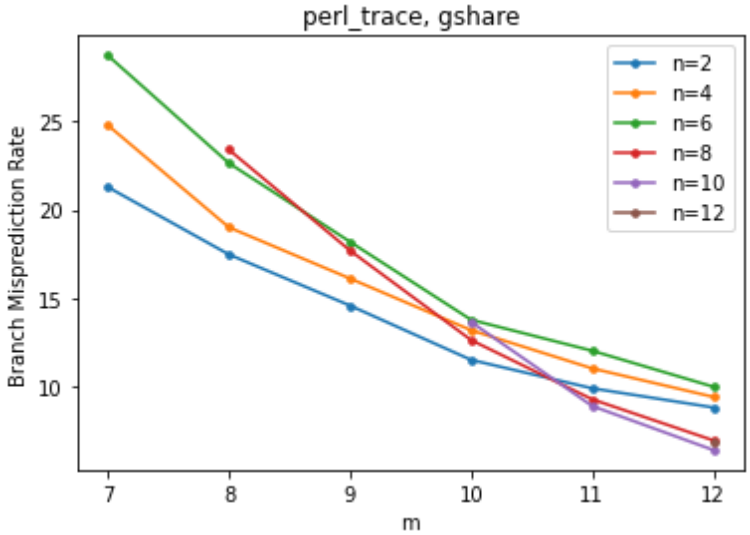

jpeg_trace, bimodal
Branch Misprediction Rate
m
7.85
7.80
7.75
7.70
7.65
7.60
7.55
7.50
7
8
9
10
11
12


perl_trace, bimodal
Branch Misprediction Rate
m
20
18
16
14
12
10
7
8
9
10
11
12

7.3.b Gshare


gcc_trace, gshare
Branch Misprediction Rate
m
n=2
n=4
n=6
n=8
n=10
n=12


jpeg_trace, gshare
Branch Misprediction Rate
m
n=2
n=4
n=6
n=8
n=10
n=12


perl_trace, gshare
Branch Misprediction Rate
m
n=2
n=4
n=6
n=8
n=10
n=12