**Lab3 Report**

2019-15516 한승윤

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| Not Taken | bst\_array | fibo | matmul | prime\_fact | quicksort | spmv | spconv |
| NUM\_COND\_BRANCHES | 1942 | 200 | 3272 | 4207 | 5488 | 8302 | 36569 |
| BP\_CORRECT | 627 | 131 | 388 | 1664 | 2167 | 3967 | 9223 |
| Accuracy | 32.29% | 65.50% | 11.86% | 39.55% | 39.49% | 47.78% | 25.22% |

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| Gshare | bst\_array | fibo | matmul | prime\_fact | quicksort | spmv | spconv |
| NUM\_COND\_BRANCHES | 1942 | 200 | 3272 | 4207 | 5488 | 8302 | 36569 |
| BP\_CORRECT | 1225 | 136 | 2602 | 3330 | 3746 | 4129 | 26429 |
| Accuracy | 63.08% | 68.00% | 79.52% | 79.15% | 68.26% | 49.74% | 72.27% |

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| Perceptron | bst\_array | fibo | matmul | prime\_fact | quicksort | spmv | spconv |
| NUM\_COND\_BRANCHES | 1942 | 200 | 3272 | 4207 | 5488 | 8302 | 36569 |
| BP\_CORRECT | 1336 | 144 | 2768 | 3542 | 3879 | 6145 | 30143 |
| Accuracy | 68.80% | 72.00% | 84.60% | 84.19% | 70.68% | 74.02% | 82.43% |

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| Performance | bst\_array | fibo | matmul | prime\_fact | quicksort | spmv | spconv |
| Gshare | 1.22 | 1.02 | 1.42 | 1.36 | 1.16 | 1.01 | 1.26 |
| Perceptron | 1.27 | 1.05 | 1.47 | 1.43 | 1.17 | 1.18 | 1.34 |

README.md에 적힌 대로 Gshare와 Perceptron branch prediction을 제작하였다. Not Taken, Gshare, Perceptron 순서로 Performance와 BP accuracy가 상승함을 확인하였다.