

Performance results calculated based on the average of 5 runs of program.

## 1 MILLION DATA

```
#DENSE-BOOST#
INSERT: 915.2 ns
UPDATE: 401.8 ns
DELETE: 806.0 ns

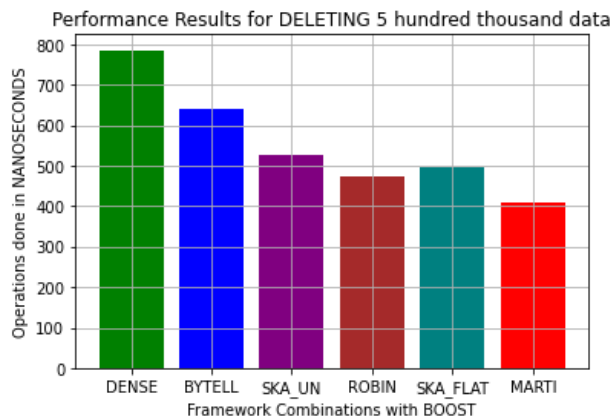
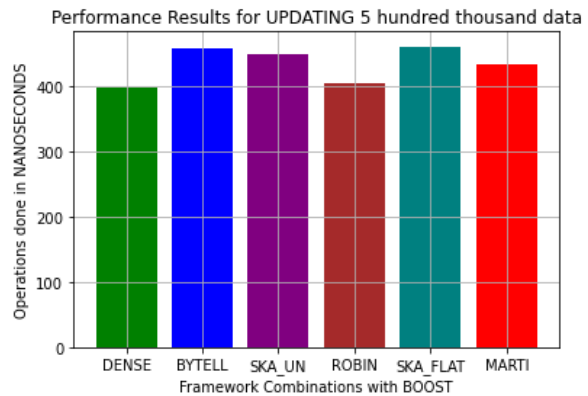
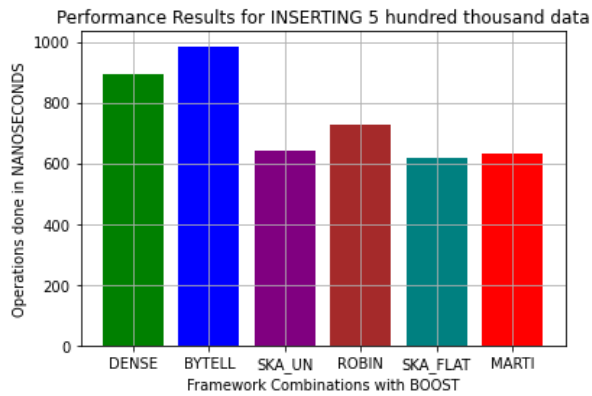
#BYTELL-BOOST#
INSERT: 919.0 ns    -3.799999999999545 ns faster than DENSE-BOOST
UPDATE: 419.6 ns    -17.80000000000001 ns faster than DENSE-BOOST
DELETE: 592.4 ns    213.60000000000002 ns faster than DENSE-BOOST

#SKA_UNORDERED-BOOST#
INSERT: 694.2 ns    221.0 ns faster than DENSE-BOOST
UPDATE: 441.6 ns    -39.80000000000001 ns faster than DENSE-BOOST
DELETE: 560.2 ns    245.79999999999995 ns faster than DENSE-BOOST

#ROBIN-BOOST#
INSERT: 749.2 ns    166.0 ns faster than DENSE-BOOST
UPDATE: 414.8 ns    -13.0 ns faster than DENSE-BOOST
DELETE: 538.6 ns    267.4 ns faster than DENSE-BOOST

#SKA_FLAT-BOOST#
INSERT: 652.6 ns    262.6 ns faster than DENSE-BOOST
UPDATE: 466.8 ns    -65.0 ns faster than DENSE-BOOST
DELETE: 531.8 ns    274.20000000000005 ns faster than DENSE-BOOST

#MARTINUS-BOOST#
INSERT: 668.8 ns    246.40000000000001 ns faster than DENSE-BOOST
UPDATE: 423.0 ns    -21.19999999999999 ns faster than DENSE-BOOST
DELETE: 446.2 ns    359.8 ns faster than DENSE-BOOST
```



Performance results calculated based on the average of 5 runs of program.

## 5 HUNDRED THOUSAND DATA

```
#DENSE-BOOST#
INSERT: 893.4 ns
UPDATE: 397.2 ns
DELETE: 785.0 ns

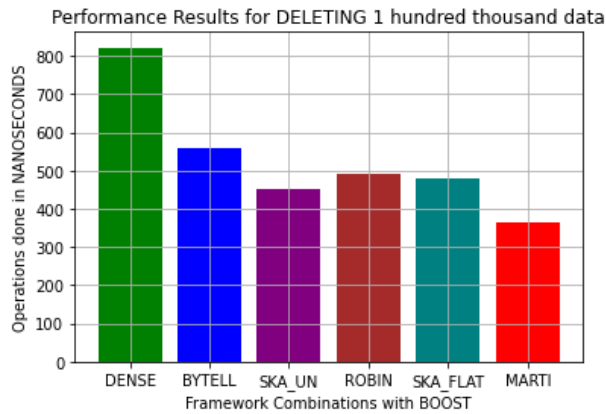
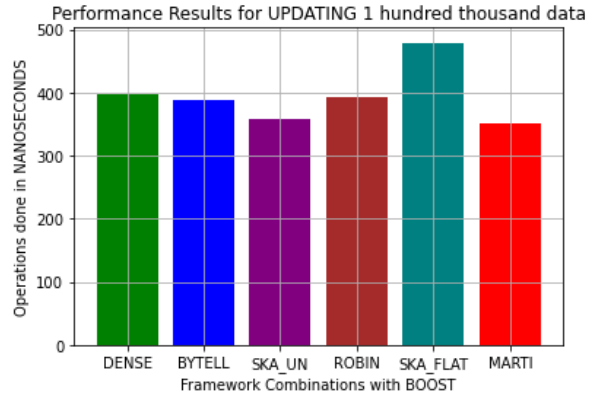
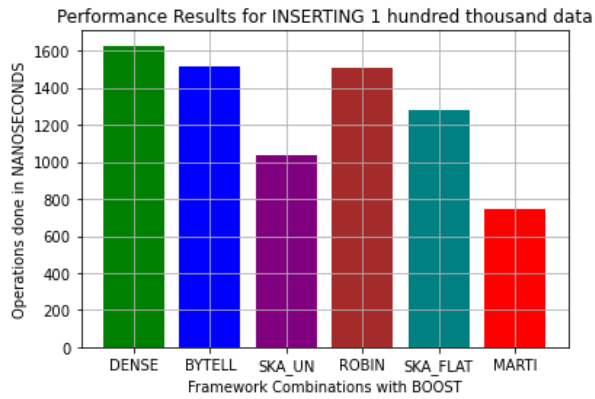
#BYTELL-BOOST#
INSERT: 984.6 ns -91.20000000000005 ns faster than DENSE-BOOST
UPDATE: 456.6 ns -59.400000000000034 ns faster than DENSE-BOOST
DELETE: 638.4 ns 146.60000000000002 ns faster than DENSE-BOOST

#SKA_UNORDERED-BOOST#
INSERT: 639.0 ns 254.39999999999998 ns faster than DENSE-BOOST
UPDATE: 448.4 ns -51.19999999999999 ns faster than DENSE-BOOST
DELETE: 526.8 ns 258.20000000000005 ns faster than DENSE-BOOST

#ROBIN-BOOST#
INSERT: 728.6 ns 164.79999999999995 ns faster than DENSE-BOOST
UPDATE: 403.6 ns -6.400000000000034 ns faster than DENSE-BOOST
DELETE: 473.4 ns 311.6 ns faster than DENSE-BOOST

#SKA_FLAT-BOOST#
INSERT: 618.8 ns 274.6 ns faster than DENSE-BOOST
UPDATE: 460.0 ns -62.80000000000001 ns faster than DENSE-BOOST
DELETE: 495.2 ns 289.8 ns faster than DENSE-BOOST

#MARTINUS-BOOST#
INSERT: 634.0 ns 259.4 ns faster than DENSE-BOOST
UPDATE: 433.6 ns -36.400000000000034 ns faster than DENSE-BOOST
DELETE: 410.2 ns 374.8 ns faster than DENSE-BOOST
```



Performance results calculated based on the average of 5 runs of program.

## 1 HUNDRED THOUSAND DATA

```
#DENSE-BOOST#
INSERT: 1626.6 ns
UPDATE: 397.2 ns
DELETE: 821.2 ns

#BYTELL-BOOST#
INSERT: 1511.8 ns    114.7999999999995 ns faster than DENSE-BOOST
UPDATE: 388.8 ns    8.39999999999977 ns faster than DENSE-BOOST
DELETE: 557.8 ns    263.4000000000001 ns faster than DENSE-BOOST

#SKA_UNORDERED-BOOST#
INSERT: 1035.0 ns    591.5999999999999 ns faster than DENSE-BOOST
UPDATE: 358.0 ns    39.19999999999999 ns faster than DENSE-BOOST
DELETE: 453.0 ns    368.20000000000005 ns faster than DENSE-BOOST

#ROBIN-BOOST#
INSERT: 1510.4 ns    116.19999999999982 ns faster than DENSE-BOOST
UPDATE: 392.8 ns    4.39999999999977 ns faster than DENSE-BOOST
DELETE: 492.6 ns    328.6 ns faster than DENSE-BOOST

#SKA_FLAT-BOOST#
INSERT: 1283.2 ns    343.39999999999986 ns faster than DENSE-BOOST
UPDATE: 479.0 ns    -81.80000000000001 ns faster than DENSE-BOOST
DELETE: 477.6 ns    343.6 ns faster than DENSE-BOOST

#MARTINUS-BOOST#
INSERT: 747.2 ns    879.3999999999999 ns faster than DENSE-BOOST
UPDATE: 351.0 ns    46.19999999999999 ns faster than DENSE-BOOST
DELETE: 363.0 ns    458.20000000000005 ns faster than DENSE-BOOST
```