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Big Data Analytics: A Trading Strategy of NSE Stocks Using Bollinger Bands Analysis

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examined the profits generated over one trading year. The tick-by-tick stock market data has been sourced from the NSE and was purchased by Amrita School of Business. The tick-by-tick data being typically Big Data was converted to a minute data on a distributed Spark platform prior to the analysis.

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```
for(i in 1:49)

{rm(stock);

work<-stock_list[i]

setwd("C:\\Users\\Desktop\\bb\\yearfullsorted");

stock1<-read.csv(work)

stock<-stock1[1:350,];

names(stock)[1]<-"stock";

names(stock)[2]<-"date";names(stock)[3]<-"time"

names(stock)[4]<-"price";

names(stock)[5]<-"qty";
```

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```
work<-stock_list[i];

setwd("C:\\Users\\Desktop\\bb\\yearfullsorted")

stock<-read.csv(work);names(stock)[1]<-"stock";

names(stock)[2]<-"date";names(stock)[3]<-"time";

names(stock)[4]<-"price";names(stock)[5]<-"qty";
setwd("C:\\Users\\Desktop\\bb\\work")

source("bollinger.R");

setwd("C:\\Users\\Desktop\\bb\\yearfullsorted")

}

bollinger.R
```

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```

invest_fund=100000; for(i in 40:tot_rows)

{if ((stock$price[i]<stock$LB[i]) && (stock$qty[i] > (avg_qty)))

{qty_bought=qty_bought + round((invest_fund/stock$price[i]),digits=0);

bb<-round(invest_fund/stock$price[i], digits=0);

qq<- qq+bb; buy_amt<-buy_amt+invest_fund;}

if ((stock$price[i]>stock$UB[i])&& (stock$qty[i] >avg_qty))

{sold<-(stock$price[i]*qty_bought);sold_amt<-sold_amt+sold;

qty_bought=0;}}

invest_amt_bal=(qty_bought*max(stock$price))

tot_sale=sold_amt+invest_amt_bal; intraday_profit=tot_sale-buy_amt;

```

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