The impact of our new age has been most intensely felt in the two fields of globalization and

automation and trading is no exemption. Algorithmic Trading (AT) in India has picked up in

leaps and bounds. With nearly 50% of trading volume in India coming from algo traders it

has become vital to understand it completely. Each time an order is placed in the stock

exchange; there is a 50% chance that a machine would make the other side of the order

decision. Algorithmic or Algo trading (AT) and High Frequency Trading (HFT) are now the

hot talk of the financial town. Trading that takes place on an automated level is called AT.

Computers are given specific commands to follow (algorithms) and make trades at large

volumes and high speeds. Automation of the trading process improves the efficiency of

market, rectifies pricing anomalies and improves liquidity in the market.In the US and other developed markets, HFT and AT constitute 70% of equities market share. Over the past few years the share of AT in turnover of the Indian stock exchange has grown drastically. AT and HFT in India across the cash and derivatives market as a percentage of total turnover has increased up to 49.8% in eight years from merely 9.26% (average) in 2010.Market regulator SEBI recently strengthened the framework for AT, making its acceptance more pervasive. SEBI‟s recent announcement on steps for strengthening algo trading through shared co-location has boosted the sentiments of algo solutions providers. However it is found that there is a dearth of academic research in this area of study and thus this paper aims at elaborating the evolution of AT in the Indian equity market and its significant progress, the pros and cons of AT, future prospects and the regulations of SEBI.The paper also reviews academic research articles on this area of study and investigates the scope for further research in the field of AT.