**LITERATURE SURVEY**

**1) A Machine learning approach to Building domain-specific Search engine**

**AUTHORS:**  Andrew McCallum, Kamal Nigam, Jason Rennie, Kristie Seymore

We consider the problem of planning the ISS cosmonaut training

with diﬀerent objectives. A pre-deﬁned set of minimum qualiﬁcation

levels should be distributed between the crew members with minimum

training time diﬀerences, training expenses or a maximum of the train-

ing level with a limitation of the budget.

First, a description of the cosmonaut training process is given.

Then four models are considered for the volume planning problem.

The objective of the ﬁrst model is to minimize the diﬀerences between

the total time of the preparation of all crew members, the objective of

the second one is to minimize the training expenses with a limitation of

the training level, and the objective of the third one is to maximize the

training level with a limited budget. The fourth model considers the

problem as an 𝑛-partition problem. Then two models are considered

for the calendar planning problem.

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Domain-specific search engines are becoming increasingly popular because they offer increased accuracy and extra features not possible with general, Web-wide search engines. Unfortunately, they are also difficult and time consuming to maintain. This paper proposes the use of machine learning techniques to greatly automate the creation and maintenance of domain-specific search engines. We describe new research in reinforcement learning, text classification and information extraction that enables efficient speeding, populates topic hierarchies, and identifies informative text segments. Using these techniques, we have built a demonstration system: a search engine for computer science research papers available at www.cora.justrcsettrch.com.

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For the volume planning problem, two algorithms are presented.

The ﬁrst one is a heuristic with a complexity of (𝑛)operations. The

second one consists of a heuristic and exact parts, and it is based on

the 𝑛-partition problem approach.

# 2) Stock Market Volatility - A Study Of Indian Stock Market.

**AUTHORS**: Agarwal , Reena, Carla Inclam and Ricardo Leal, A.K.Srivastava and Ankita Srivastava

# The paper evaluated the multidimensional framework of stock market volatility. High indices of stock market in every aspect of measurement implied less variability of volatility. A country‘s depression or recession turned into severe volatile stock market which cannot be cured in the short run. Political turmoil or instability or chaos made negative impact on stock market which spurs volatility. The stock market volatility has the negative nexus with the growth rate of a nation i.e. high volatility reduces growth rate. There is causality between them. Since stock market volatility brings forth economic crisis which has ultimately spill over on growth inversely to other countries as well. The international trade and stock market volatility is negatively related in the sense that volatility reduces the volume of trade and increases current account and capital account deficits.

# 3) Prediction of Stock Market Deviation Using Arima Algorithm

# AUTHORS: NIRANJANA. S, NIFASATH AFSHAN, SUPRAJAA. A, LEELA JANCY. P

Stock market is an ideal way to invest hard earned money as it has the potential to provide great returns. But, even with the current technology at hand, it is a risky deed due to the inability to understand sudden market changes and interpret data appropriately. To ease the process of investment and to provide better awareness, we propose ‘Prediction of stock market deviation using ARIMA algorithm’: real-time risk prediction software that considers market interests. It is based on a parametric time series analysis technique- ARIMA (Auto Regressive Integrated Moving Average) algorithm to interpret historic data. It also makes use of Sentiment analysis to convert market trends to valuable information. Since stock market is highly influenced by information release and public acceptance, the addition of Sentiment Analysis to ARIMA boosts system performance and provides a more accurate representation of market volatility. The software provides pictorial and graphical representations and can also be used to compare the growth of two companies for the required time period. The objective is to provide short term and long term prediction capabilities to prepare for future potential investments.

**4)** Towards the Fundamentals of Technical Analysis: Analyzing the Information Content of High, Low and Close Prices. Economic Modeling

**AUTHORS:** Craig McCormacka , Olga Bannovab, Sheryl Bishopc , Jorge D. Cambab

Technical analysis assigns a special importance to the Open, High, Low and Close prices in forecasting the mean and volatility of exchange rates. In this paper we propose to investigate the time series properties and the informational content of these different prices, using range and co integration methods. The application of these methods to a high frequency data set indicates the existence of stable structural relationships and asymmetric information flows, which is supportive of certain predictions of market microstructure models of the foreign exchange market. In sum, we argue that a technical analysis of High, Low and Close prices is a useful way of learning about latent Granger causality in high frequency exchange rates.