



.....from the CEO's desk

After many quarters of bad news, this quarter was a quiet one with nothing significant happening in the global economy, which is good news. Going by the stock market performance, especially in India, the economy is witnessing a slow turn around. However this is fuelled by the optimism or the feeling that "it can't get worse" rather than any real change in the fundamentals, which is the reason one feels an underlying sense of caution. I feel there will be another quarter of 'cautious optimism' before any concrete direction will emerge, and hopefully in the right direction.

For the sports buff this was an action packed quarter with big events across Soccer, Golf, Tennis and Cricket. Sports is one area where use of analytics is gaining a lot of importance. We put this to the test in the World T-20 Cricket tournament. And it really works!! Raja has an article on how we used analytics to predict the winners of the T-20 matches.

This issue we would like to introduce Sandeep, one of the early members of our team. He is quite an unassuming person and solves even the most complex of business problems with uncanny ease.

As always we are on a constant improvement process and would like your feedback on this issue.

Roy K Cherian

Meet some of our associates.....

Sandeep Devagiri



Sandeep is one of our 'Gurus' in SAS and SQL, reporting and modeling. Prior to Marketelligent, he was with TNS India Pvt. Ltd., a leading market research firm.

Sandeep understands the market research process from questionnaire preparation, sample selection and survey techniques to qualitative and quantitative data analysis and segmentation. He has more recently, as part of Marketelligent, worked at a leading private sector Indian Bank's various departments such as collections, operations, strategy and optimization, and has a good understanding of data warehouse structures in financial institutions.

His experience also includes measuring operation risk variables as per Basel II norms, and building Customer Lifetime Value frameworks. He has an MS in Biomedical Engineering from University of Aberdeen and a BE in the same from Osmania University. In his words – "I love neural networks and genetic algorithms, have used them for image enhancement and noise reduction, and trying to implement them now in other businesses".

When he's not swimming in numerical oceans he loves spending time on PC games, movies and travelling to remote places.

Q2 2009 Highlights

- Partnered with a leading Consumer Finance Company in the UAE for their CRM Analytics
- Launch of 'LISTEN', a platform that mines unstructured text data for actionable insights. Under evaluation for a leading Bank's Customer Service Center data records to better manage cross-sell

Sports: Predicting the Unpredictable

Raja Abhishek & Issac Mathew, Marketelligent

Cricket has been followed avidly by its fans all over the world, but to non-cricket playing nations its appeal has been curbed mainly by the pace of the game and the duration. Enter the latest format, Twenty20 or T-20 which gets over faster than an average NBA game, add some glamour in the form of movie stars and celebrity franchise owners, bring on the cheer-leaders, throw in whopping, unheard of sums for player auctions and you have an instant mix of commercial success. It is the uncertainty of a mere 20 overs, where any single over can change the outcome, that adds a dash of suspense and thrill to this already heady cocktail.

We brought out the crystal balls, tried to churn the numbers and arrive at the winners in this highly unpredictable (or so they claim) form of the game. We were pleasantly surprised to see that the predictive model results are over 88% accurate! Check out <http://howzzat.tk/> for the blog with live predictions.

Model Methodology and Accuracy

The model was built on 83 T-20 format matches played before the 2009 T-20 World Cup with the objective of predicting the winner of a match at half-time. Some of the significant inputs that played a key role in accurately predicting the winner were: run target, team winning toss, win percentage difference between the teams, etc.

Overall accuracy of the model: 22 correct predictions out of 25 predictions made for an overall accuracy of 88%.

Predicted Upsets

This model also predicted many of the upsets correctly, e.g. Netherlands Vs. England. See chart on right. The probability curve in the picture indicates that the required score for England to win the match was 175 (more than 60% chance of winning is a good cut-off to decide the match winner). England scored only 162 and lost the match.

Model Deficiency and Limitations

The model is not fool-proof and was not able to accurately predict the results for three matches. It doesn't work for interrupted matches where the Duckworth-Lewis method is typically used, or for matches with less than 10 overs.

While these results are impressive there is a lot more that can be done in cricket as well as in other sports, both in prediction and in historical analysis. In cricket, we can easily adapt the same model to aid national team selectors or franchise owners to select the best team composition. Having done that, the same techniques can further help the coaches and the captain decide the best batting order. Some of the recent maverick moves in shuffling the batting order proved costly for the Indian T-20 side, and we strongly believe that such decisions become less risky when mathematical models are leveraged. Sport and news channels are forever vying for eyeballs and as the recent trends prove, glamorous commentators attract viewers, but fail miserably when it comes to retaining them. If a channel has experts analyzing the game, combined with their cricketing wisdom, statistical modeling can lend credibility to the analysis, the same way psephologists make predictions during the pre-poll analysis discussions.

Extending the train of thought, horse racing and online betting have probably seen a lot of modeling and analytics. Innovative uses have been for player drafts by the Oakland Athletics in baseball as immortalized in *Moneyball* (Lewis). Another striking example, is for identifying match fixing in Sumo wrestling as explained in *Freakonomics* (Dubner and Levitt). The possibilities are endless and we have barely scratched the surface here. We're glad to see that what started off as a pet project has turned into a potential gold mine to bring mathematical models from the realm of books to prime time television.

Netherlands vs. England: England Loses !

