



Real P&L improvement using Machine Learning

P&L improvement with almost no disruption to existing systems – by Deb Stambaugh, Vice President Solution Marketing, r4 (a technology partner of BigData4Analytics)

I had the opportunity the other day to spend some time with r4's Chief Data Scientist, Igor Zhuk. He is the master of mathematics that turn data into dollars. Sitting with him is like taking a year-long PhD course in a single day. Our topic of discussion ... what is machine learning and how does it deliver unprecedented benefits?

Q: Igor, what is Machine Learning and what can I use it for to improve my business?

In 1959, [Arthur Samuel](#) defined machine learning as a "Field of study that gives computers the ability to learn without being explicitly programmed." The amazing thing, answers are all around us. We just need a way to find them. Machine learning is the mechanism to find insights hidden within big data. We live in an era now that we can set machines off to find the answers for us. Through millions of data points machines enable us to find the patterns or insights hidden within big data. And big data continues to grow. By current estimates, there are 2.5 Exabyte's (that's 2.5 followed by a staggering 18 zeros!) generated daily or 90% of all the data in the world having been produced within the last 2 years. This means that we need real help finding answers.

Q: How is r4's approach to machine learning unique?

r4 is all about driving business improvement. Most people think of machine learning – as a way to make better looking dashboards or reports that give insights. At r4 we have a deep commitment to helping clients to change big data from non-value baggage to a revenue and profit builder that drives giant improvements. Through a unique combination of artificial intelligence and machine learning r4 helps clients to find the proverbial "needle in the haystack" of opportunity as well as identify "new haystacks" of profit, revenue, and efficiency.

Q: Based on your experience leading the big data mission at both Priceline.com and now at r4, what



do you view as success?

Dramatically improved business KPIs and more money in the bank for our clients, period.

Everything else is about building technology for technology's sake. Our definition of success is breakthrough improvements with little to no IT work on our client partners' parts. This is no longer a dream. It is now the new reality best practice.

Q: Igor, this sounds fantastic, can you give me an example of what this looks like?

Absolutely. Let's take consumer goods. r4 powers highly accurate recommendations identifying what product mix to deliver to specific stores based upon precise customer tastes and preferences. We can literally predict exactly which product should go on a shelf at exactly the right time. Think about that for a minute. That means consumers will always get exactly what they are looking for and retailers and CPG companies make more money. The best part, these product recommendations are automatically driven into existing legacy distribution and supply chain systems. Absolutely no new systems.

Q: Thanks so much Igor, any parting thoughts for our audience?

I'd like to challenge my colleagues to bring us the KPI or business outcome you are trying to drive. I am certain r4 can power it.

