

# Analytics

DRIVING BETTER BUSINESS DECISIONS

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## ARTIFICIAL INTELLIGENCE MEETS HUMAN CURIOSITY

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Damo Consulting CEO Paddy Padmanabhan on creating value in an era of pervasive analytics and cheap computing

# Democratization and crowdsourcing

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Creating value in an era of pervasive analytics and cheap computing.

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We're seeing a convergence of demand and supply-side forces that is unlocking the potential of advanced analytics.

We are entering an era of democratization and crowdsourcing of analytics, driven by the acceleration of technological innovation and the open source movement, coupled with a global pool of highly qualified data scientists and big data technologists. All this is happening rapidly while the costs of computing and data storage continue to fall.

Today, we're seeing a convergence of demand and supply-side forces that is unlocking the potential of advanced analytics. Some of these are:

- increasing importance of analytics for enterprise growth and profitability,
- falling prices for data storage and computing capacity,
- acceleration of technology innovation, and
- a huge demand for data scientist talent.



BY PADDY  
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## DEMOCRATIZATION OF ANALYTICS

In recent years, expensive and complex analytical tools and technology have become accessible and affordable to people and business. The computational horsepower needed to conduct analysis on vast amounts of data has also dropped significantly

in recent years in line with Moore's Law. With storage and computing capacity becoming very affordable and practically available on tap, analytics is no longer constrained by scalability and affordability.

IBM Watson Healthcare and Microsoft Azure machine learning as a service are examples of how complex technologies and analytical models are being made available freely for teams to build solutions on. This puts the power of advanced analytics in the hands of increasing numbers of non-technical executives and individuals, creating a democratization effect [1].

### **CROWDSOURCING COMES TO DATA SCIENCES**

Much is being written about the huge shortage of data scientist talent and the pursuit of "unicorns" – analytics superheroes who can single-handedly wrangle the biggest and baddest data sets into yielding pearls of insights that translate into "ka-ching" sounds at the cash register. There's a catch, though. Actually, two. One, these people don't exist. Two, if they do, they cost \$250,000 a year and are barely out of college.

Large enterprises are nevertheless falling over each other to hire as many of these individuals as they can. Talk about tulipmania in the 21st century.

There's no doubt a giant bottleneck in the supply side for data scientist talent, as enterprises look to gain competitive edge through advanced analytic models and machine-learning algorithms that can provide that extra insight into profit-making opportunities. As with all such situations, creative solutions are bound to emerge and restore balance through a "reversion to the mean" in data-scientist speak. We're seeing that happen through a variety of approaches, including a team approach (hiring two or three individuals with a combination of the required skills), and offshore sourcing, especially from India. An emerging trend is crowdsourcing.

Companies are building business models that range from creating online marketplaces where you can "shop" for algorithms, and throwing out a specific problem for the community at large to find a solution to. Generally speaking, I am personally skeptical about "plug and play" algorithms. Crowdsourcing seems more likely to provide a unique solution to meet your needs. There are obviously cost-benefit tradeoffs.

### **AUTOMATION, CONSUMERIZATION AND OPEN EVERYTHING**

Trends such as democratization and crowdsourcing of analytics are marketplace responses to steady and growing demand on the one hand and a serious

shortage of talent on the other. The good news is that accessibility to data, software, hardware, education and even research results are available for free or low cost. Today you can learn a programming language for free from a variety of online services and use free or inexpensive hardware and software for your analysis.

Open source software, such as R and Python, are rapidly becoming the de facto standard tools for analysis by many, particularly in the big data analytics disciplines. This will democratize analytics even further while driving down costs.

Finally, the wearables revolution – Fitbit, Jawbone, Apple watch and the like – will consumerize analytics in all walks of life with their always-on tracking of our movements, fitness and health data. They will also further miniaturize the devices through which we can gain access to the awesome power of big data and cognitive computing platforms such as IBM Watson. What Google Glass has failed to do, maybe Apple Watch will, at least in terms of functionality.

What's not to like about all this? Not much, except that one shouldn't get carried away too much about the possibilities. Advanced analytics is still in nascent stages, and the reliability and quality of analytic insights and algorithms has to be carefully examined

before being put to work in high-stake decisions. Wearables have a long way to go in delivering on-demand advanced analytics. The Apple Watch, for instance, is a work in progress with many incomplete features, such as the health app.

A nagging question that keeps coming up in boardrooms across the nation is: What is the ROI on analytics investments? The answers are not clear today. If the costs of analytical experimentation are low and the opportunities to experiment are many, this will encourage a higher analytics adoption rate and lead to newer use cases. This will give us the breakthroughs we need to bring about sustained value creation in every sector.

Democratization and crowdsourcing may be our best bets to achieve that in the near future.

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**Paddy Padmanabhan** is CEO of *Damo Consulting Inc.*, a management consulting firm that provides advanced analytics solutions to healthcare enterprises. A business leader and entrepreneur with more than 15 years of experience in the healthcare sector, Padmanabhan has held global leadership positions in top-tier consulting firms and led large global operations teams in India, the Philippines and South America. He has successfully built a \$150 million healthcare business, led analytics start-ups and developed cloud-based platforms. For more, see <https://www.linkedin.com/in/paddypadmanabhan99>.

## REFERENCES

1. For a detailed discussion on democratization in analytics, download a white paper by Larry Boyer and Paddy Padmanabhan [here](#).