WHY BIG DATA = BIG DEAL

Vasant Dhar
Editor-in-Chief

“BIG DATA” HAS BECOME A WIDESPREAD TERM used to describe the exponential growth and availability of data in all forms. What is particularly notable is the relative explosion of unstructured data that continues to boom with social media and mobile growth, new devices, and the fact that data are being generated increasingly by computers.

The vast amount of data we are now able to collect and analyze has become a real challenge in the growth of businesses, big and small, across industries: healthcare, finance, entertainment, transportation, you name it. A key question is *why* is big data so important, and how do we harness the potential of this data to make better business decisions and improve the way we live?

This is where I expect *Big Data* to have an impact in multiple ways:

1. Unlike traditional journals who want to encourage big data publications in addition to their main and traditional focus, we focus exclusively on big data. We have no baggage.
2. Unlike traditional journals that are saddled by a long peer-review process that can take 2–4 years from writing until publication and are ill-equipped to handle the explosion of content in the area of data science, our process is designed to be rapid and unencumbered by the “values” of traditional journals or the “disciplinary/methodological biases” that can slow down or derail high-quality articles.
3. By providing a unique forum for world-class peer-reviewed research, editorials, columns, perspectives, interviews, and reports that address the challenges and opportunities in approaching the prospects of data, our journal is the go-to resource in better understanding how big data can make the greatest impact. As long as

the article is interesting, methodologically sound, and novel, we will publish it quickly.

4. We have jump started the journal through a high-quality cast of senior editors who are pioneers in data science or related areas and who are committed to providing time and high-quality feedback on submitted work. You are working with the pros.

It would be much too ambitious of me to try and state all the benefits that we will accrue, as a global community, from big data. One fundamental reason why big data is a big deal is that we can “create knowledge” from data, where the “we” refers to computers or computers aided by humans or humans aided by computers. This is what the field of “data science” is all about, and in my recent article published in *Communications of the ACM*, entitled “Data Science and Prediction,” I have defined data science as “the study of the generalizable extraction of knowledge from data.” Big data is what provides the fuel for data science.

In most businesses and governments, managers are struggling to relate investments in data to return on investment (ROI). How should we create, organize, and manage a data science team? What data technologies should we invest in? Why? How much? What benefits will we gain? Will big data enable us to ask the right types of questions, ones we could not ask before? Will it enable us to build better predictive models? As I always tell my students, asking the right question is perhaps the most significant ingredient in knowledge creation. And newly created knowledge is made “actionable” by its ability to make predictions with confidence.

For individuals, will big data make our lives better? Will it lead to better health outcomes? Enable us to have more fun? Make more money? Find and interact with people that interest us? Again, the possibilities are many.

For society, will big data lead to a complete invasion of privacy and life as we have known it for centuries? Or will we be able to reap the tremendous benefits without exposing us to the hazards of unwanted transparency?

Our journal expects to address these types of questions through its focus on data and to propose effective efforts to find the best strategies through data that will benefit society, industry, government, and individuals.

I am honored to be the editor-in-chief of this exciting journal and encourage you to explore our publication and submit your manuscript for consideration. Be prepared to see some really cool research published in our journal this year and in the years to come.

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