

How Would Statisticians Dance the Waltz with Computing Engineers in the Big Data Era?

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Abstract

In this essay, we examined the four notable differences between the analytical methods of statisticians and computing engineers in the big data era, and then explored ways to make collaborations between statisticians and computing engineers. First, we discussed what big data is, since big data breeds the birth of data science and stimulates the progress of artificial intelligence. Next, we pointed out the differences between statistical methods and algorithmic methods from the point of view of a statistician. Finally, we proposed the possibilities of how statisticians and computing engineers may work together to complement each other's strengths and weaknesses.

Keywords: Data science, statistical methods, algorithmic methods, data mining, machine learning, pattern recognition